



AGENDA

Policy & Planning

Tuesday 26 April 2022, 10.30am

Policy and Planning Committee

26 April 2022 10:30 AM

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Purpose of Policy and Planning Committee meeting

This committee attends to all matters of resource management, biosecurity and related environment policy.

Responsibilities

Prepare and review regional policy statements, plans and strategies and convene as a Hearing Committee as and when required for the hearing of submissions.

Monitor plan and policy implementation.

Develop biosecurity policy.

Advocate, as appropriate, for the Taranaki region.

Other policy initiatives.

Endorse submissions prepared in response to the policy initiatives of organisations.

Membership of Policy and Planning Committee

Councillor C L Littlewood (Chairperson)	Councillor N W Walker (Deputy Chairperson)
Councillor M G Davey	Councillor M J McDonald
Councillor D H McIntyre	Councillor C S Williamson
Councillor E D Van Der Leden	Councillor D N MacLeod (ex officio)
Councillor M P Joyce (ex officio)	

Representative Members

Councillor C Young (STDC)	Councillor S Hitchcock (NPDC)
Councillor G Boyde (SDC)	Mr P Moeahu (Iwi Representative)
Ms B Bigham (Iwi Representative)	Ms L Tester (Iwi Representative)

Health and Safety Message

Emergency Procedure

In the event of an emergency, please exit through the emergency door in the committee room by the kitchen.

If you require assistance to exit please see a staff member.

Once you reach the bottom of the stairs make your way to the assembly point at the birdcage. Staff will guide you to an alternative route if necessary.

Earthquake

If there is an earthquake - drop, cover and hold where possible. Please remain where you are until further instruction is given.



Date 26 April 2022

Subject: **Confirmation of Minutes - 15 March 2022**

Approved by: A D McLay, Director - Resource Management
S J Ruru, Chief Executive

Document: 3038067

Recommendations

That the Policy and Planning Committee of the Taranaki Regional Council:

- a) takes as read and confirms the minutes and resolutions of the Policy and Planning Committee of the Taranaki Regional Council held in the Taranaki Regional Council Boardroom, 47 Cloten Road, Stratford on Tuesday 15 March 2022 at 10.30am
- b) notes the recommendations therein were adopted by the Taranaki Regional Council on Tuesday 5 April 2022.

Matters arising

Appendices/Attachments

Document 3015213: Minutes Policy and Planning Committee 15 March 2022



Date 15 March 2022, 10.30am

Venue: Taranaki Regional Council Boardroom, 47 Cloten Road, Stratford

Document: 3015213

Members	Councillor	C L Littlewood	Committee Chairperson
	Councillor	N W Walker	Committee Deputy Chairperson <i>zoom</i>
	Councillor	M J McDonald	<i>zoom</i>
	Councillor	D H McIntyre	<i>zoom</i>
	Councillor	C S Williamson	<i>zoom</i>
	Councillor	E Van Der Leden	<i>zoom</i>
	Councillor	D N MacLeod	ex officio <i>zoom</i>

Representative

Members	Councillor	G Boyde	Stratford District Council <i>zoom</i>
	Ms	B Bigham	Iwi Representative <i>zoom</i>
	Mr	P Moeahu	Iwi Representative <i>zoom</i>

Attending	Mr	S J Ruru	Chief Executive
	Mr	A D McLay	Director - Resource Management
	Ms	A J Matthews	Director - Environment Quality
	Mr	D R Harrison	Director - Operations
	Mr	C Spurdle	Planning Manager
	Mr	C Wadsworth	Strategy Lead <i>Zoom</i>
	Mr	S Tamarapa	Iwi Communications Advisor
	Miss	R Sweeney	Governance Administrator
	Ms	L Miller	Consents Officer
	Mrs	J Allen	Consents Manager
	Ms	A Campbell	Policy Analyst
	Ms	G Marcroft	Policy Analyst
	<i>Two members of the public and two members of the media.</i>		

Apologies Apologies were received and sustained from Stacey Hitchcock - New Plymouth District Council, Louise Tester - Iwi Representative, Phil Muir - Federated Farmers and Councillors M P Joyce and M Davey. Walker/MacLeod

Notification Of Late Items There were no late items

1. Confirmation of Minutes – 1 February 2022

Resolved

That the Policy and Planning Committee of the Taranaki Regional Council:

- a) takes as read and confirms the minutes and resolutions of the Policy and Planning Committee of the Taranaki Regional Council held in the Taranaki Regional Council Boardroom, 47 Cloten Road, Stratford on Tuesday 1 February 2022 at 10.30am
- b) notes the recommendations therein were adopted by the Taranaki Regional Council on Monday 21 February 2022.

Boyde/McIntyre

Matters arising

- 1.1 Councillor C L Littlewood requested clarification on the recommendation for the Iwi Management Plans.

2. Freshwater Programme Update

- 2.1 Mr C Wadsworth, Strategy Lead - Resource Management, spoke to the memorandum to provide the Committee with a Freshwater implementation programme update.
- 2.2 The independent review group report on the programme and its implementation will be provided to the next meeting. A member of the group will zoom into the meeting.

Recommended

That the Taranaki Regional Council:

- a) receives an update on the Freshwater implementation programme

MacLeod/Boyde

3. Freshwater Engagement on the Long-term Vision for Freshwater

- 3.1 Ms G Marcroft, Policy Analyst, and Mr C Spurdle, Policy Manager, spoke to the memorandum to present Members with the findings of the first phase of public engagement on the development of a long-term vision for freshwater, which is to be included as an objective under the regional policy statement section of the *Proposed Natural Resources Plan for Taranaki*.
- 3.2 Ms B Bigham, Iwi Representative, requested for the Policy & Planning Iwi Representatives to be notified of future iwi consultation.

Recommended

That the Taranaki Regional Council:

- a) receives the Memorandum titled *Preliminary engagement on the long-term vision for the freshwater*
- b) notes that Council officers will be undertaking further engagement with iwi authorities and stakeholders to confirm and explore the findings of the first phase of engagement.

Bigham/MacLeod

4. Use of Iwi Management Plans within Council

- 4.1 Ms A Campbell, Policy Analyst and Mrs J Allen, Consents Manager presented for Members information on how Iwi Management Plans are used in policy development and in resource consent processing. There are currently 6 plans in place, with Ngati Maru Iwi intending to prepare a plan. Ngati Tama Iwi have not signalled an interest in preparing a plan.
- 4.2 Ms Bigham, Iwi Representative, requested an update be given to the Committee, potentially on a six month basis, that provides an update on the status of iwi management plans, how they are progressing and additionally, the creation of the plans for the two iwi in Taranaki currently without them.

Recommended

That the Taranaki Regional Council:

- a) receives the memorandum
- b) notes the use made of Iwi Management Plans at the Council in resource management and other activities
- c) determines that this decision be recognised as not significant in terms of section 76 of the *Local Government Act 2002*
- d) determines that it has complied with the decision-making provisions of the *Local Government Act 2002* to the extent necessary in relation to this decision; and in accordance with section 79 of the Act, determines that it does not require further information, further assessment of options or further analysis of costs and benefits, or advantages and disadvantages prior to making a decision on this matter.

MacLeod/Young

5. General Business

- 5.1 Councillor D N MacLeod requested officers to investigate the options available to sustainably manage kaimoana in the regions coastal waters, given iwi concerns about over fishing and dwindling resource availability.

Recommended

That the Taranaki Regional Council:

- a) confirms that an agenda item be prepared detailing the options available to sustainably manage kaimoana in the regions coastal waters, given iwi concerns about over fishing and dwindling resource availability.

MacLeod/Bigham

There being no further business the Committee Chairman, Councillor C L Littlewood, declared the meeting of the Policy and Planning Committee closed at 12.40pm. The meeting closed with a karakia.

Confirmed

**Policy and Planning
Chairperson:** _____

**C L Littlewood
26 April 2022**



Date 26 April 2022

Subject: **Freshwater Implementation Programme Update**

Approved by: A D McLay, Director - Resource Management
S J Ruru, Chief Executive

Document: 3040034

Purpose

1. The purpose of this memorandum is to provide the Committee with a Freshwater implementation project update.

Recommendations

That the Taranaki Regional Council:

- a) receives the update on Freshwater implementation programme.

Background

2. The Council has prepared an implementation programme of the Government's Freshwater programme. The purpose of this memorandum is to update Members on progress in implementing the project. The implementation programme has previously been presented to, and approved by, the Committee.

Financial considerations—LTP/Annual Plan

3. This memorandum and the associated recommendations are consistent with the Council's adopted Long-Term Plan and estimates. Any financial information included in this memorandum has been prepared in accordance with generally accepted accounting practice.

Policy considerations

4. This memorandum and the associated recommendations are consistent with the policy documents and positions adopted by this Council under various legislative frameworks including, but not restricted to, the *Local Government Act 2002*, the *Resource Management Act 1991* and the *Local Government Official Information and Meetings Act 1987*.

Iwi considerations

5. This memorandum and the associated recommendations are consistent with the Council's policy for the development of Māori capacity to contribute to decision-making processes (schedule 10 of the *Local Government Act 2002*) as outlined in the adopted long-term plan and/or annual plan. Similarly, iwi involvement in adopted work programmes has been recognised in the preparation of this memorandum.

Community considerations

6. This memorandum and the associated recommendations have considered the views of the community, interested and affected parties and those views have been recognised in the preparation of this memorandum.

Legal considerations

7. This memorandum and the associated recommendations comply with the appropriate statutory requirements imposed upon the Council.


Appendices/Attachments








Document 3042626 - Freshwater Implementation Project - Report to Policy & Planning Committee (April 2022)



Freshwater Implementation Project Report to Policy & Planning Committee

26 April 2022

Executive Summary	
	Progress has picked up again after the slight stalling at the start of the year and due to adjusting to the impact of covid policies on working arrangements.
	A major step was the commencement of the formal engagement process, starting with stakeholder groups representing primary industries and general industry. Attendances were impacted somewhat by site access restrictions, however the conversation and outputs were positive – with a number of participants commending the approach taken.
	Also over the reporting period, agreement was reached with iwi on a structure for Council to finance the appointment of two Iwi Planning Officers. While those officers will be directed by iwi, it is agreed by all parties that a large part of their focus will be to support this FW Implementation process.
	On a related note, progress is being made on finalising a Heads of Agreement for the Waitara River Committee. While this group sits outside of the FW Implementation process, its recommendations and planned activities are expected to be significant inputs to the overall FW regime.
Project Programme	
Key project achievements during the last reporting period	
<ul style="list-style-type: none"> Specific implementation activities: <ul style="list-style-type: none"> Initial engagement workshops with primary sector and general industry stakeholders were well received and delivered good input/information to the project team Policy and plan drafting continuing, including developing FW Vision straw man, plus drafting rules on water allocation and structures. Drafting commenced on wetlands. Baselining work on the water quality measures required under NPS-FM – especially E.coli and phosphorus. Agreement finalised for Council to fund two Iwi Planning Officers to support partnering with iwi on key elements of plan drafting. 	
Key upcoming activities and milestones in the next reporting period	
<ul style="list-style-type: none"> Continue iwi engagement – including starting general engagement with individual iwi and CEO level engagement. Continue developing mahinga kai and threatened species values framework(s). Commission social, cultural and economic costs and benefits analyses. Continue plan drafting – focusing on structures and wetlands. Internal review workshops on draft structures and water allocation rules. Engagement with iwi partners on FW Vision before developing a first draft/“straw man” for broader engagement. Continue roll out of limit setting – science led activities to inform policy drafting and engagement. Begin initial modelling of attribute load reductions to inform limit setting process – including conducting (or commissioning) analysis of the impacts (including costs, cultural, social) of different limit options. Preparing for next round of engagement with general stakeholders as follow up to initial workshops, Drafting a decision making process document – setting out the required steps for internal and external (ie. governance) review and approval of key deliverables. 	
HSE Updates	
Nothing significant to report	

Workstream Status Summary		
Workstream	Tracking	Comments/Clarifications
Tangata whenua partnerships		<ul style="list-style-type: none"> Overall iwi engagement programme is underway – led by a combination of the CEO and Iwi Communications. Planning is currently in progress for engagement with each individual iwi over the coming months. Agreement signed for Council to sponsor two Iwi Planning Officers to act as a liaison and collaborator with Policy and Planning staff. Recruitment of those Officers by Iwi is currently underway. Continuing engaging with iwi on NPS-FM when opportunities arise while waiting conditions to change to allow more intensive, face-to-face engagement.
Policy and Planning		<ul style="list-style-type: none"> Commenced regular meeting round with Communications and Mataruanga Maori on general tangata whenua engagement and as preparation for developing a more detailed engagement plan. Draft rule sections on structures ready for internal review. Drafting continuing/underway on allocation and wetlands. Leading engagement with TLA's on the broader RPS/NRP development.
Science Services		<ul style="list-style-type: none"> Phosphorus monitoring started first sampling run. Delays in sedimentation modelling due to unavailability of consultants until the new financial year. Draft E.coli report received, with initial indications that very significant reductions will be needed if Taranaki is to meet the NPS-FM targets. Work continuing on limit setting, with each completed science component released to Policy and Communications for engagement processes as available to help maintain progress.
Consents		<ul style="list-style-type: none"> No noticeable increase in consent applications related to FW Implementation. Consents team preparing new website section and templates for key FW related consents. Developing streamlined Rivers Advisory technical requests format. Intended to also be a model for other technical requests.
Compliance		<ul style="list-style-type: none"> Limited activity at present, due to government postponing/delaying implementation timelines of key elements. Continuing providing key FW related messaging to farmers during dairy round (eg., N-Cap reporting, feed-pads, effluent discharge rules).
Operations		<ul style="list-style-type: none"> Continued work on roll out of hill country plans. Beginning audit round of riparian programme properties. Contributed to MfE request for engagement on intensive winter grazing regulations.
Communications		<ul style="list-style-type: none"> First two engagement sessions held with primary sector and general industry. Beginning work on follow up, more topic specific engagement planned for the following six months. Working with Iwi Communications to prepare material and set timing for extensive iwi engagement. Continuing recruiting for Engagement Officer position.

Project Risk/Opportunity Management

Description	Effect	Mitigation Strategy	Risk Rating (unmitigated)	Actions currently being taken
Lack of a clear strategy and timeline for engagement on key strategic issues.	<p>Engagement in this sense is the two way discussions needed to obtain external stakeholder input on key FW programme and FW Plan elements.</p> <p>Engagement requirements for FW are significantly higher than previous TRC experience (due to NPS-FW requirements). Experience from other RC's is that the process can be long and involved.</p> <p>Lack of dedicated engagement (as opposed to comms) resources to manage this process.</p>	<p>Build greater alignment around the nature and timing of the engagement that is needed.</p> <p>Develop specific strategies and plans to undertake the focused engagement.</p> <p>Consider ways to address Council's current gaps in capacity and capability to lead engagement processes.</p>	High	<p>Currently developing position description and beginning recruiting process for engagement officer role.</p> <p>Detailed engagement plan developed and being implemented. Plan identifies two key stakeholder groups who will receive more extensive engagement – as well as higher level consultation and information for more general groups.</p> <p>Plan will be implemented in parallel with the current workstreams to develop iwi partnering (led by CEO and Iwi Communications, with support from all FW Focus Leads).</p>

Description	Effect	Mitigation Strategy	Risk Rating (unmitigated)	Actions currently being taken
Lack of clarity and guidance due to gaps in key Government advice or changes in the policy/legal framework	<p>Some FW Implementation elements need to be developed in the absence of clear guidance – which may result in changes later if Government position changes. This lack of guidance also increases risks of a need for rework.</p> <p>Examples of areas where there are gaps in clear guidance include:</p> <ul style="list-style-type: none"> Managing diffuse nitrogen loss risks (including the applicability of Overseer) Managing climate change impacts on freshwater. 	<p>Recognise that some level of risk is unavoidable.</p> <p>Maintain strong presence on Government (especially MfE) and sector working groups.</p> <p>Maintain contacts with other regional council <i>Essential Freshwater</i> teams.</p> <p>Develop tools and processes that based on established or determined best practice.</p>	High	<p>Risk has impacted delivery and is a factor behind the revised project timeline.</p> <p>Officers are progressing activities to the extent that they can – with a constant attempt to balance between maintaining progress and minimising the risk of potential rework. Policy & Planning and Science Services activities are the most impacted.</p> <p>Risk is expected to remain high for the duration of the project.</p>



Date: 26 April 2022

Subject: **Essential Freshwater Implementation Review**

Approved by: A D McLay, Director - Resource Management
S J Ruru, Chief Executive

Document: 3036743

Purpose

1. The purpose of this memorandum is to inform the Committee of the recent changes to Essential Freshwater (FW) implementation and the review of that process by external consultants.

Executive summary

2. The Government's Essential Freshwater Package, released in late 2020, requires the Council to give effect to numerous elements – from plan writing to enforcing regulations related to intensive winter grazing – that cross multiple Council teams. In order to effectively manage that implementation, officers developed a detailed project plan that has been used to guide and co-ordinate activities since. Regular updates against that plan are provided to this Committee.
3. As part of good project management practice, the implementation plan was reviewed in October 2021. At that time, a number of procedural changes were made to the project management structure to ensure greater transparency against key tasks and milestones. The review also saw a revision of the expected completion date for the plan drafting process, reflecting both changes in the external environment and the effect of having a better picture of potential timelines six months into implementation.
4. At the same time, following a meeting with other regional councils to discuss their FW implementation progress, officers proposed the idea of an external review of the implementation process. That review, conducted in late January 2022, endorsed the overall approach being taken and resulted in 10 specific recommendations to strengthen the implementation process.
5. This memorandum summarises both the internal review in October 2021 and the more recent external review.

Recommendation

That the Taranaki Regional Council:

- a) receives this Memorandum *Essential Freshwater Implementation Review*.

Background

6. In late 2020, officers began developing a detailed Implementation Plan (“the Plan”) for the Essential Freshwater Package. That Plan was presented to this Committee in June 2021 for information and endorsement. At the time, officers advised that, in accordance with good project management practice, they would be reviewing the Plan and the supporting governance structures every six months. The goal of those reviews was a combination of:
 - 6.1. Maintaining overall progress, at a longer term view than the monthly operating reporting and review cycles
 - 6.2. Reviewing and rescheduling (as required) activities against a combination of achievability, changes in the external environment and changes in task priorities
 - 6.3. Ensuring the achievability of the overall completion target, following the conclusions to the reviews in paragraphs 3.1 and 3.2
 - 6.4. Ensuring that the governance structures and project tools being used continued to support the efficient and effective achievement of the Plan.
7. That review led to a number of changes to the project approach, including revising the governance structure and the Plan format. It also led to an extension of the proposed Plan completion date from December 2023 to June 2024. Those changes were presented at the November 2021 meeting of this Committee as part of the regular project update. The Committee endorsed the changes, but asked to see the detailed Plan at a later meeting.
8. Around the time of the reviews, officers participated in a Lower North Island Council NPS FW meeting. That meeting was an opportunity for Regional Council planning, science and iwi relations staff to meet and discuss issues and opportunities that they were experiencing in FW Implementation.
9. Following that meeting, officers saw the value in conducting an external review of the Plan, using consultants who had the benefit of experience from assisting other councils’ implementation across the country. That review occurred in January 2022, with results and recommendations communicated in late February 2022.
10. This Memorandum briefly revisits the findings, conclusions and changes in our internal review (including presenting the current version of the Plan) and provides a summary of the external review conducted earlier this year.

Discussion

Internal Review – September 2021

11. The first such review was conducted in September 2021, being approximately six months since the Plan commenced.
12. Key findings from that September 2021 review, which were reported to this Committee in the November 2021 meeting, included:
 - 12.1. As a better picture of the true implementation tasks and timelines has emerged, Officers are seeing a more complex project and, therefore a slower pace, than the original schedules predicted.
 - 12.2. Staff resource limitations in 2021 negatively impacted Policy & Planning and Communications deliverables (including tasks around engagement). Recent appointments have begun to reverse those impacts and show potential to make good progress from this point forward.

- 12.3. Lack of clear direction and lack of information from Ministry for the Environment (MfE) has created uncertainty, preventing completion of some key tasks. Specifically, issues are around:
 - 12.3.1. Changes in Intensive Winter Grazing direction (required reversing drafting work) and Farm Plans (progress on rules delayed while awaiting clarity).
 - 12.3.2. Indications that the directions on allocation may be changed – but no clear timing or details provided.
- 12.4. Continued consultation requirements from MfE has meant that staff resources have been diverted from progressing the project to responding to those processes.
- 12.5. Increasing collaboration across the teams is positive and is leading to strong outcomes – particularly in the Science and Policy & Planning spaces.
- 12.6. Operational activities are progressing well – but are another area impacted by MfE changing requirements and dates.
13. The outcomes of that review were presented to this Committee as part of the November freshwater implementation progress update report. Key elements of that review (as reported at that time) were:
 - 13.1. The Plan format was reviewed to provide a clearer picture of key tasks and deliverables by month for the six months from November and per six-month period over the longer term.
 - 13.2. There was a commitment to revisit the Plan every six months to both flesh out the detail for the six-month period ahead and to confirm the achievability and priority of activities and deliverables. This approach is taken to enable a greater level of certainty of the tasks and also to ensure that there is review of the tasks from the prior six-month period.
 - 13.3. Significant attention was given to developing a more detailed engagement plan – which also highlighted capacity and capability gaps within the Council. The focus on engagement in Essential Freshwater is a step-change in complexity and detail from the previous expectations on planning processes.
 - 13.4. Revised the internal governance structure by refocusing and changing the scheduling of key project meetings. In particular, the Internal Steering Committee membership was revised to include the CEO and Directors from Resource Management, Environment Quality and Operations.
 - 13.5. Endorsement of the continued approach of reporting to this Committee each meeting as a governance update.
14. Importantly, as a result of this review and the resulting amendments to plans, the project team and the Internal Steering Committee have revised the date for notification of a draft plan from December 2023 to June 2024. Officers believe that this date is more realistic in the current environment.
15. The revised Plan from November is attached to this Memorandum, for Members information. Officers are currently conducting the first of the six-month reviews, updating the detail and extending the Plan until the end of December 2022.

External Review – January 2022

16. Officers also engaged external consultants to conduct a full, “cold eyes” review of the Plan in January 2022.
17. The Review Team chosen had a good knowledge of FW policy, science and planning – including experience with the sort of Hearings Panels that are proposed as the last stage of the freshwater planning process before plans become operative. That team was:
 - 17.1. Christina Robb – overall policy and project approach, convenor of various national level FW working groups.
 - 17.2. Ned Norton – freshwater scientist, involved with supporting science and general implementation for a number of regional councils.
 - 17.3. Christine Foster – planner and a member of hearings panels.
18. Part of the cost of the review was met by Ministry for the Environment, as the Review Team members are contracted to Te Uru Kahika (the regional sector) who are supported by Ministry funding to provide services to councils’ FW implementation processes.
19. The review was conducted over two days in late January 2022, with members of our internal Freshwater Leads group and the Steering Committee present throughout.
20. Key conclusions from that review, which are provided in more detail in the presentation that Christina Robb will give to the Committee (and a copy of which accompanies this Memorandum), include:
 - 20.1. The Review Team were impressed by the level of cohesion and commitment across the implementation team, including the support that the Executive Team was providing. They described the turnout across the departments as “remarkable and everyone seems to be on board”.
 - 20.2. In common with the Review Team’s observations in other regions, the Council’s targets were described as “ambitious in the tight time frame available”. Again, the Review Team noted officers’ strong commitment to the project as a key factor in being able to meet those targets.
 - 20.3. The Review Team identified ten key focus areas and recommendations:
 - 20.3.1. Two recommendations focusing on completing the implementation of the new project structure, to facilitate a streamlined and efficient process for progressing the implementation steps. Related to this recommendation was ensuring that there was an efficient process for the Implementation Team to raise and receive clarification on issues.
 - 20.3.2. A need to clarify the decision making structures, including outlining internal (officer level) plan content decisions and the role of external bodies, including this Committee. There was a recommendation to discuss any draft decision proposals with tangata whenua and also to document the processes.
 - 20.3.3. Two recommendations around partnering with iwi that focus on continuing to look to strengthen the current relationships for both FW Implementation and longer term, bigger picture purposes.
 - 20.3.4. The second of the recommendations on iwi partnerships noted the challenges being experienced across the country with progressing tangata whenua involvement in FW implementation – due to a combination of the required timelines and tangata whenua resources to engage. The Review

- Panel recommended making sure that all parties understood the competing demands that Council faces to both engage and progress the Plan at the same time.
- 20.3.5. To accelerate progress on the engagement plan, starting with some initial “scene setting and listening” sessions that build on the work done in 2021 to engage on an overall freshwater vision.
 - 20.3.6. The Review Team also made five smaller recommendations on such things as documenting key risks, use of the section 32 Report in the new FW planning environment and aligning more strongly with the overall RPS review.
- 20.4. Officers received the final report in late February, but started working on the Review Team’s recommendations immediately following the review meeting. In particular, progress has been made on:
- 20.4.1. Implementing a new project management structure, which was finalised in February (the first implementation team meeting of the New Year), including a return to fortnightly meetings and a greater focus on deliverables and milestones.
The role of the SteerCo was strengthened, including establishing a cycle of monthly SteerCo reviews of key issues and opportunities within the implementation meetings.
Officers and SteerCo have noticed an overall increase in clarity and progress under the new meeting structure.
 - 20.4.2. Working on the four recommendations related to decision processes, with an intention to report to this Committee when final drafts are reached.
 - 20.4.3. The recommendations described in paragraphs 16.3.3 and 16.3.4 are being progressed primarily by Councils’ Iwi Communications and Mātauranga Māori staff, with support from the CEO. A significant recent milestone was the agreement for Council to provide support for two Iwi Planning Officers to support the iwi of Taranaki and to play roles within the implementation project team.
 - 20.4.4. Two “scene setting” engagement sessions were held – one with primary sector stakeholders and the other with general industry stakeholders – in early April. Iwi partnership engagement is due to commence later this month and further engagement is planned on various topics over the remainder of the year.
 - 20.4.5. The remaining recommendations are being progressed, including especially greater alignment between the RPS and FW Plan preparation processes.
21. Officers will continue implementation of the Review Panel’s recommendations and will continue to update this Committee of progress on these and the Plan in general through the regular reporting cycle.
22. Officers have also shared our experience of this external review process with other councils at regular cross-council working group meetings. As a result, other councils have picked up the same process and are seeing encouraging results from conducting a detailed review of their implementation plans.

Financial considerations—LTP/Annual Plan

23. This memorandum and the associated recommendations are consistent with the Council's adopted Long-Term Plan and estimates. Any financial information included in this memorandum has been prepared in accordance with generally accepted accounting practice.

Policy considerations

24. This memorandum and the associated recommendations are consistent with the policy documents and positions adopted by this Council under various legislative frameworks including, but not restricted to, the *Local Government Act 2002*, the *Resource Management Act 1991* and the *Local Government Official Information and Meetings Act 1987*.

Iwi considerations

25. This memorandum and the associated recommendations are consistent with the Council's policy for the development of Māori capacity to contribute to decision-making processes (schedule 10 of the *Local Government Act 2002*) as outlined in the adopted long-term plan and/or annual plan.
26. The review has highlighted the importance of Iwi being actively involved with the Essential Freshwater work programme albeit that this should occur within the context of the overall relationship that Council is looking to develop with Iwi. In this regard consideration will be given to their role in the different stages of the formal decision-making process this is defined.

Community considerations

27. This memorandum and the associated recommendations have considered the views of the community, interested and affected parties and those views have been recognised in the preparation of this memorandum.

Legal considerations

28. This memorandum and the associated recommendations comply with the appropriate statutory requirements imposed upon the Council.

Appendices/Attachments

Document 3037795 – FW Implementation Plan – October 2021

Document XXXXX: Presentation on FW Implementation Review (to be circulated once provided)

NPS-FW Implementation and FW Plan Development Process – 2021 – 2024

Timeframe	Tangata Whenua Communications & Mātauranga Māori	Policy & Planning	Science Services	Operations/Inspectorate/Consents	Key FW Implementation Deliverables
By Nov 2021	<p>Establish/confirm tangata whenua relationships</p> <p>Early engagement with iwi, including discussions around resourcing and agreeing to a set of principles with tangata whenua about how TRC intends to engage (who TRC should talk to, when, in what way, etc.).</p> <p>Establish overarching vision and commitment to freshwater management and governance.</p>	<p>Establish TRC's approach to implementation</p> <p>Determine the requirements implement the NPS-FM, any constraints to achieving this, and timeline by which it can be achieved.</p> <p>Identify gaps in data and programme/timeline/resourcing requirements to address these gaps.</p> <p>Community consultation / iwi engagement</p> <p>Investigate tangata whenua engagement model for co-design of NRP (and limit setting). Draft FMUs published for community engagement, starting with iwi engagement.</p> <p>Catchment stocktake – SCIENCE SERVICES ONLY</p> <p>Identify our conceptual understanding and the current state of each FMU sufficient for a catchment-level conversation with the community, including;</p> <ul style="list-style-type: none"> • Primary contact sites and monitoring sites • Water bodies within the FMU and their state and trends (and changes since OP became operative) • Comparison of values against standards • Minimum flows and allocation limits • Swimmability targets • OP and NPSFM objectives • List of interventions at community scale • List of programmes at regional scale • Relevant sources of contaminants • Wetlands, stream loss, fish passage, fish species and other NPSFM requirements. <p>NOTE: SOE report preparation will provide context for some of this work</p>		<p>Land Management</p> <p>Riparian auditing app and grading tables functional</p> <p>Inspectorate</p> <p>Undertaking information collection regarding feed pads. Information is being collected during the annual dairy round, which started 1st September 2021.</p>	<ol style="list-style-type: none"> 1. Baseline water quality state and trends report published for attributes with available data. 2. Publish draft FMUs, update website content, and supporting documentation. 3. Riparian plan auditing underway 4. SedNet modeling is finalized and delivered

Policy and Planning Committee - Essential Freshwater Implementation Review

Timeframe	Tangata Whenua Communications & Mātauranga Māori	Policy & Planning	Science Services	Operations/Inspectorate/Consents	Key FW Implementation Deliverables
By Dec 2021	<p>Catchment stocktake</p> <p>Stocktake of any available iwi monitoring and reporting, including consideration of how we will record and treat mātauranga and oral korero</p> <p>Identify/establish and consult on possible frameworks and monitoring tools for cultural monitoring/mātauranga Maori.</p> <p>General</p> <p>Continue work with Iwi Chairs to establish a Taranaki definition of Te Mana o te Wai.</p> <p>Begin the roll out of the overall engagement plan – using iwi engagement as the first opportunity for using that plan.</p>	<p>Catchment stocktake</p> <p>Identify regional water quality and quantity issues, objectives, policies and values in the RPS and planning instruments and how these currently translate at an FMU level sufficient for a catchment-level conversation with the community.</p> <p>Develop draft long term vision for FMUs to inform tangata whenua and community engagement.</p> <p>Compile information on water values from Iwi management plans and statutory acknowledgements for s32 purposes. The exercise will also ensure planners have an understanding of the history of, and current pressures on, waterbodies in the region from the tangata whenua perspective.</p> <p>Continue to identify and map sites of significance to Maori for inclusion in the NRP.</p> <p>Plan Drafting</p> <p>Drafting plan provisions for water allocation</p>	<p>Catchment stocktake</p> <p>Identify our conceptual understanding and the current state of each FMU sufficient for a catchment-level conversation with the community, including;</p> <ul style="list-style-type: none"> • Primary contact sites and monitoring sites • Water bodies within the FMU and their state and trends (and changes since OP became operative) • Comparison of values against standards • Minimum flows and allocation limits • Swimmability targets • OP and NPSFM objectives • List of interventions at community scale • List of programmes at regional scale • Relevant sources of contaminants • Wetlands, stream loss, fish passage, fish species and other NPSFM requirements. <p>NOTE: SOE report preparation will provide context for some of this work</p>	<p>Land Management</p> <p>Prepare data on the impact of Land Management programmes/interventions on hill country and riparian/ring plain waterbodies – for input to FMU level baselines and stock takes</p>	<ol style="list-style-type: none"> Review of statutory acknowledgements and iwi management plans (currently underway). Monitoring network review and proposed new monitoring programme design (underway). Complete draft provisions for water allocation
<ul style="list-style-type: none"> • Internal (staff): Deliver update for interested staff (NOF Intro; Limit Setting & Action Plans; Freshwater Interventions; Values, Outcomes & Attributes) • Agriculture Support stakeholders: Interest Group meetings held for (Group 1: Fed Farmers, Beef + Lamb, Dairy NZ) and (Group 2: Taranaki Catchment Communities) on NOF Intro and Freshwater Interventions. • Agriculture stakeholders: Advertising in <i>Daily News</i> farming supplement (Freshwater Interventions focus) • Iwi: Schedule meeting with Ngati Ruanui, Ngati Mutunga and Ngaruahine 					

Policy and Planning Committee - Essential Freshwater Implementation Review

Timeframe	Tangata Whenua Communications & Mātauranga Māori	Policy & Planning	Science Services	Operations/Inspectorate/Consents	Key FW Implementation Deliverables
By Jan 2022	<p>Catchment stocktake</p> <p>Stocktake of any available iwi monitoring and reporting, including consideration of how we will record and treat mātauranga and oral korero</p> <p>Identify/establish and consult on possible frameworks and monitoring tools for cultural monitoring/mātauranga Maori.</p> <p>Engagement</p> <p>Hold three information gathering hui with iwi.</p> <p>General</p> <p>Receive, assess/review and implement the proposed broader iwi engagement framework proposal.</p>	<p>Plan Drafting</p> <p>Begin drafting plan provisions for structures.</p>	<p>Catchment stocktake</p> <p>Identify our conceptual understanding and the current state of each FMU sufficient for a catchment-level conversation with the community, including;</p> <ul style="list-style-type: none"> • Primary contact sites and monitoring sites • Water bodies within the FMU and their state and trends (and changes since OP became operative) • Comparison of values against standards • Minimum flows and allocation limits • Swimmability targets • OP and NPSFM objectives • List of interventions at community scale • List of programmes at regional scale • Relevant sources of contaminants • Wetlands, stream loss, fish passage, fish species and other NPSFM requirements. <p>NOTE: SOE report preparation will provide context for some of this work</p> <p>Monitoring Network Review</p> <p>Review currently monitoring network and alignment with NPS-FM requirements, including new attributes.</p>	<p>Land Management</p> <p>Hill country staff employed, trained and ready for LUC mapping. Continue auditing status and impacts of riparian plantings. Begin implementing the hill country programme (as per Long Term Plan commitments). Aggregate wetlands information to a single layer within the GIS (still waiting on government definition)</p>	<p>8. Report on community vision for freshwater values.</p> <p>9. Stocktake of mātauranga Māori / iwi monitoring and reporting.</p> <p>10. Stocktake of possible frameworks, monitoring tools for iwi.</p> <p>11. Catchment contaminant loads and load reductions report published./Catchment stocktake reports published for each FMU.</p> <p>12. Complete farm plans for 10,000 ha of hill country farms.</p> <p>13. Engagement framework developed.</p> <p>14. Successful delivery of three information gathering hui with iwi.</p>
<ul style="list-style-type: none"> • All stakeholders: Social Pinpoint (online engagement tool) procured • All stakeholders: Develop consultation material for community consultation around values (FMU) outcomes and attributes 					
By Feb 2022	<p>Engagement</p> <p>With Communications, undertake all necessary preparation work to begin implementing the engagement plan from February 2022.</p>	<p>Limit Setting</p> <p>Review limit setting requirements and begin developing options for consideration.</p>	<p>General</p> <p>Investigate natural processes impacts for phosphorus and sediment – and prepare report for use in rules and/or action plans.</p>		<p>15. Internal comms (preparation for community consultation).</p> <p>16. External comms (community meetings, iwi, advertising, public information).</p> <p>17.</p>
	<p>Freshwater accounting</p> <p>Identify commonalities between mātauranga and freshwater monitoring as required by NPS-FM and community.</p>	<p>Plan Drafting</p> <p>Continue drafting plan provisions for structures.</p> <p>Begin drafting plan provisions for wetlands.</p>			
<ul style="list-style-type: none"> • Agriculture stakeholders: Advertising in <i>Daily News</i> farming supplement, Newsletter to agriculture consent holders (Content: All) • Iwi: Hold three information gathering hui with Ngati Ruanui, Ngati Mutunga and Ngaruahine (Content: FW Issues of significance) • Internal (staff): Deliver update for interested staff (Freshwater Interventions; Values, Outcomes & Attributes) 					

Policy and Planning Committee - Essential Freshwater Implementation Review

Timeframe	Tangata Whenua Communications & Mātauranga Māori	Policy & Planning	Science Services	Operations/Inspectorate/Consents	Key FW Implementation Deliverables
By Mar 2022	Monitoring Networks Mātauranga Maori establish proposed platform to capture values information /mātauranga (narrative and numeric) Begin developing mahinga kai and threatened species values framework(s). Review currently monitoring network and alignment with NPS-FM requirements, including new attributes.	Plan Drafting Complete drafting plan provisions for structures. Begin drafting plan provisions for wetlands.	Limit Setting Begin initial modelling of attribute load reductions to inform limit setting process – including conducting (or commissioning) analysis of the impacts (including costs, cultural, social) of different limit options		18. Draft report on mātauranga Maori monitoring and reporting framework(s).
	Social, cultural, environmental, economic costs-benefits Commission expert advice to determine economic costs and benefits, another to determine ecosystem costs and benefits Commission expert advice to determine social and cultural costs and benefits (often called cultural impact study), and reflecting the inputs received by iwi/hapū and communities through the FMU consultation process				19. Initial drafting of costs-benefits report
	<ul style="list-style-type: none"> o Local Government: District Planners workgroup established and in discussion re consultation topics (Content: TBA) o Iwi: Hold five information gathering hui with remaining iwi authority reps (Content: FW Issues of significance) o Tangata whenua: Host/facilitate interest group meetings (Content: FW Issues of Significance) o Agriculture stakeholders: Newsletter to agriculture consent holders (Content: All) o Agriculture Support stakeholders: Interest Group meetings held for (Group 1: Fed Farmers, Beef + Lamb, Dairy NZ) and (Group 2: Taranaki Catchment Communities) on FW Accounting – Quantity 				
By Apr 2022	Identify FMU values¹ Begin engagement with iwi and hapū to compile mātauranga to augment the information contained in the catchment stocktakes, capture additional information contained in the catchment stocktakes, capture additional information on values for water (particularly water quality).	Rework Plan values² Continue compiling community freshwater values, as identified through consultation and as informed by Tangata Whenua Communications and Science Service workstreams (including S.O.S),	Identify FMU values Determine monitoring requirements and monitoring network suitable for each FMU to measure and report on freshwater values, as identified through consultation.	Land Management Collate monitoring data in IWG for quarterly reporting (reporting to start from June 2022)	20. Values and outcomes summary report and accompanying public information.
	<ul style="list-style-type: none"> o Iwi: Hui with iwi authorities about FMU Values, Attributes and Outcomes incl mātauranga o Tangata whenua: Consult with tangata whenua about Values, Attributes and Outcomes incl mātauranga (Social pinpoint) o Agriculture stakeholders: Advertising in <i>Daily News</i> farming supplement o Big Industry: Letter regarding signaling water quantity consultation and ongoing work on FW quality accounting (FW Accounting) o Advocacy groups, recreational water users, general public: Consultation on FMU Values, Attributes and Outcomes (Social Pinpoint) o Local Government: District Planners workgroup established and in discussion re consultation topics (Content: TBA) o Internal (staff): Deliver update for interested staff (Consultation on FMU Values, Attributes and Outcomes, FW quantity Accounting) 				

¹ NPS-FM 2020 – Policy 2 states that Māori Freshwater values are identified and provided for..

² Noting these will need to include at a minimum the four compulsory NPS-FM, with additional values identified in consultation with the community.

Policy and Planning Committee - Essential Freshwater Implementation Review

Timeframe	Tangata Whenua Communications & Mātauranga Māori	Policy & Planning	Science Services	Operations/Inspectorate/Consents	Key FW Implementation Deliverables
By Jun 2022	Monitoring Networks Capture values information/mātauranga (narrative and numeric) using agreed framework Begin developing other values frameworks, as necessary Review proposed monitoring network and alignment with NPS-FM requirements, including any new identified values and attributes.	Plan Drafting Continue drafting – specific topics to be determined at first review point in Jan/Feb 2022.	Limit Setting and Value Review Continue work from first plan period – specific focus to be determined at first review point in Jan/Feb 2022.	Inspectorate Information gathered, begin action on which feed pads need resource consents.	21. Finalise monitoring network review. 22. Draft RPS FW vision and FMU values 23. Publish State of Environment 2022 report and catchment report cards. 24. IWG quarterly report
	<ul style="list-style-type: none"> o Iwi: Hui with iwi authorities about Limit Setting and Action Plans and FW Accounting - Quantity o Tangata whenua: Consult with tangata whenua about Limit Setting and Action Plans and FW Accounting - Quantity (Social pinpoint) o Agriculture stakeholders: Advertising in <i>Daily News</i> farming supplement o Big Industry: Consultation re FW Accounting - Quantity o Advocacy groups, recreational water users, general public: Consultation on Limit Setting and Action Plans (Social Pinpoint) o Local Government: District Planners workgroup established and in discussion re consultation topics (Content: TBA) 				
By Dec 2022	Freshwater accounting Establish a framework for ongoing monitoring and reporting.	Objective setting Confirm desired outcomes (objectives) and attributes to be monitored in each FMU; determine indicators that would prevent degradation or result in improvement/recovery. ³	Objective setting Confirm desired outcomes (objectives) and attributes to be monitored in each FMU; determine indicators that would prevent degradation or result in improvement/recovery. ⁴ Freshwater Accounting Establish water quality modelling and first cut of catchment accounting to inform consultation.		25. Water quality modelling framework and draft report outlining initial outputs. 26. IWG quarterly report
	Engagement Dec 2022				
By Jul 2023	Draft policy and plan framework Finalise the definition of Te Mana o te Wai for incorporation into RPS and NRP.	Draft policy and plan framework Final review of objectives, policies and key plan elements with Tangata Whenua Communications and Science Services before commence preparing final draft plan (for key stakeholder review). Incorporate formatting from National Planning Standards for water chapter to RPS and NRP.	Draft policy and plan framework Rework Plan targets and limits schedules.		27. IWG quarterly report 28. Other deliverables TBD at the Dec 2022 Implementation Plan progress review.
	Engagement Jul 2023				

³ The NPS-FM requires councils and communities to be explicit about what they want to achieve in terms of values they identify, so that it can inform where they set target attribute states, and what flow regimes and take limits are needed.

⁴ The NPS-FM requires councils and communities to be explicit about what they want to achieve in terms of values they identify, so that it can inform where they set target attribute states, and what flow regimes and take limits are needed.

Policy and Planning Committee - Essential Freshwater Implementation Review

Timeframe	Tangata Whenua Communications & Mātauranga Māori	Policy & Planning	Science Services	Operations/Inspectorate/Consents	Key FW Implementation Deliverables
By Dec 2023	Draft limit setting Complete draft limit setting by finalising: <ul style="list-style-type: none">potential limits/targets/attributes against values and draft objectives.policy limitations, risks and issues with potential limits/targets/attributes to meet the draft objectives Scenario modelling and testing Road testing and case studies to assess how limits will be applied. RPS and NRP – FW give effect to the NPS - FW				29. First cut of draft limits to achieve target attributes – for community consultation. 30. IWG quarterly report 31. Limits – scenario testing report
Engagement Dec 2023					
By Jan 2024	Draft policy and plan Develop plan where this needs to be met over time.	Draft policy and plan Draft RP FMU policies, rules, standards to reflect the achievement of the WQ limits/targets/attributes against the timeframe for achievement. Review monitoring frameworks to ensure data can be captured and reported on appropriately.	Draft policy and plan Develop plan where this needs to be met over time.		32. Draft RPS and Plan
Engagement Mar 2024					
By Apr 2024	Social, cultural, environmental, economic costs-benefits Complete social, cultural, environmental and economic cost-benefits analysis. Draft policy and plan Policy and Planning lead a review and response to submissions on the draft Plan				33. Costs-benefits report
Engagement Apr 2024					
By May 2024	Finalise models, monitoring and supporting information	Finalise s32 report and final plan for notification	Finalise models, monitoring and supporting information		34. RMA s32 report 35. Finalise plan change information package
Engagement May 2024					
By Jun 2024	Notify plan change Notify NRP as per statutory processes. As per statutory requirements and timelines: <ul style="list-style-type: none">Prepare expert evidence in response to issues raised within submissionsFollow process as directed by freshwater hearings panelPrepare recommendations for presentation to Council (for agreement or EC process)			Land Management Riparian plan audits	36. Technical and planning information including expert evidence; information to inform/support process. 37. Dairy farms audited
Engagement Dec 2023					
TBD (dependent on FW Commissioner review timing)	Regional plan operative Regional policy and plan that gives effect to the NPS-FM			Land Management Hill country farm planning	38. Regional Policy Statement and FW Modules of Natural Resources Plan



Date: 26 April 2022

Subject: **Regional sector submission in response to proposed changes to the Environmental Reporting Act 2015**

Approved by: A J Matthews, Director - Environment Quality
S J Ruru, Chief Executive

Document: 3031353

Purpose

1. The purpose of this memorandum is to update Committee members on a recent submission by Te Uru Kahika – Regional and Unitary Councils Aotearoa in response to the Ministry for the Environment's proposed amendments to the Environmental Reporting Act 2015: *Te whakawhanake i te pūnaha ripoata taiao o Aotearoa – Improving Aotearoa New Zealand's Environmental Reporting System*.

Executive summary

2. The Environmental Reporting Act 2015 (ERA) provides the framework for national-level reporting on the state of New Zealand's environment. Under the ERA, the Ministry for the Environment (MfE) and Stats NZ report on the state of different aspects of our environment every six months, and our environment as a whole every three years. Recent domain and synthesis reports to be published under the ERA include *Our Air 2021* and *Environment Aotearoa 2019*.
3. Government recently sought feedback on proposed amendments to the ERA. Changes include the timing, functionality and breadth of these reports, with a view to making them more impactful. Copies of the summary and consultation documents are provided in Appendices A and B of this memorandum. Public consultation on these changes opened on 8 February 2022 and closed on 18 March 2022.
4. The sixteen regional councils and unitary authorities comprising Aotearoa New Zealand's regional sector are increasing working as a collective. The name Te Uru Kahika reflects the work and vision of the regional sector: *thriving environments and thriving communities*. Collectively, we are working via Te Uru Kahika to respond to Government policy and legislative requirements, as well as responding to the many central government proposals for consultation.
5. Te Uru Kahika provided feedback to MfE in regard to the proposed changes to the ERA. The submission focuses on three overarching issues:

- a) firstly, that environmental reporting and management must give effect to Te Tiriti o Waitangi
 - b) secondly, that environmental reporting must be integrated into a wider system of environmental management
 - c) thirdly, wider co-ordination and resourcing are needed for the many organisations involved in environmental reporting.
6. A copy of Te Uru Kahika's submission is included in Appendix C of this memorandum.

Recommendations

That the Taranaki Regional Council:

- a) receives this memorandum ' *Regional sector submission in response to proposed changes to the Environmental Reporting System* '
- b) notes the recommendations raised in the submission of Te Uru Kahika, a full copy of which is provided in Appendix C.

Background

Environmental Reporting Act 2015 (ERA)

7. Aotearoa New Zealand's ERA provides the framework for national reporting on the state of the environment. Under the ERA, MfE and Stats NZ report on the state of different aspects of our environment every six months, and our environment as a whole every three years. Recent domain and synthesis reports to be published under the ERA include *Our Air 2021* and *Environment Aotearoa 2019*.
8. The ERA has been subject to a number of changes in recent years. A review of the environmental reporting system *Focusing Aotearoa New Zealand's environmental reporting system* by the Parliamentary Commissioner for the Environment (PCE) in 2019 identified a range of opportunities to further improve environmental reporting.
9. In response to this review and other learnings, MfE recently sought feedback on a proposal to strengthen the ERA through *Te whakawhanake i te pūnaha ripoata taiao o Aotearoa - Improving Aotearoa New Zealand's environmental reporting system: Proposed amendments to the Environmental Reporting Act 2015*.
10. A key aspect of the proposal is giving a stronger voice to Te Tiriti o Waitangi, te ao Māori and mātauranga Māori. This includes exploring how mātauranga Māori, data, evidence, knowledge and science could be shared, collected, managed and protected in environmental reporting. Broader questions were also raised around how MfE can better incorporate te ao Māori and mātauranga Māori within environmental reporting.
11. In addition, MfE identified a range of proposed changes, as set out below:
 - **Clarify the purpose of environmental reporting** - Being clearer about why Government reports on the state of the environment and what the reports aim to achieve will better set the scene for interpreting and implementing the ERA
 - **Mandate a government response to synthesis reports** - A mandatory government response will increase transparency and accountability for addressing environmental issues, closing the loop between reporting and action taken

- **Add drivers and outlooks to the reporting framework** - Extending the current pressure state-impact framework to include drivers and outlooks will give a more complete view of environmental issues
 - **Adjust roles and responsibilities** - Clearly defining the joint roles and responsibilities of the Secretary for the Environment and the Government Statistician will reduce overlap and ensure that each organisation's expertise is utilised
 - **Mandate a standing advisory panel** - A mandated standing advisory panel will guarantee independent expert advice is provided across a range of perspectives and disciplines
 - **Replace environmental domains with cross-domain themes** - Cross-domain themes will better represent the complexity and interrelation of environmental systems and better reflect a holistic te ao Māori view of te taiao
 - **Reduce the frequency of synthesis reports to six-yearly** - As some rates of environmental change can be slow, moving to a six-yearly cycle will achieve a more appropriate balance between reporting timeliness, rates of change and seeing connections between changes
 - **Replace domain reports with one commentary each year** - Producing one theme-based commentary report per year will make the reporting cycle less resource intensive, encourage more in-depth analysis and reduce the risk of repetitive reporting
 - **Establish a set of core environmental indicators** - Defining core environmental indicators in the regulations will provide a directive for implementing enduring core indicators, which will improve data collection abilities
 - **Strengthen the mechanisms for collecting data** - New data collection provisions will help ensure the reporting programme has the data it needs to create a more comprehensive picture of the environment on an enduring basis.
12. Public consultation opened on 8 February 2022 and closed on 18 March 2022. A summary of the consultation document is provided in Appendix A. Detail about each proposal, including alternative options, costs, benefits and risks, is set out in the full consultation document (Appendix B).

Te Uru Kahika

13. Te Uru Kahika represents the sixteen regional councils and unitary authorities comprising Aotearoa New Zealand's regional sector. The name Te Uru Kahika reflects the work and vision of the regional sector: *thriving environments and thriving communities*.
14. Regional councils and unitary authorities have responsibilities for integrated management of land, air and water resources, supporting biodiversity and biosecurity, providing for regional transport services, and building more resilient communities in the face of climate change and natural hazards. We also have responsibilities for environmental monitoring and reporting, as set out in legislation – including the Resource Management Act 1991 (RMA) and National Policy Statement for Freshwater Management 2020 (NPS-FM). As a sector, and here in Taranaki, we are increasingly working alongside iwi/hapū and the community to respond to environmental issues - from land management and biosecurity through to freshwater improvement.
15. Fulfilment of the above-listed responsibilities is underpinned by scientific activities and expertise within regional councils. Collective science expenditure by the regional sector

exceeds \$70 million per year. We employ hundreds of scientists, engineers, planners, and policy experts, including dozens of PhDs. For decades, our network of Special Interest Groups (SIGs) has facilitated collaboration and leverage of science, policy and planning activities across the country. We provide guidance on research needs to the wider science system through our overarching science strategy and SIG science strategies.

16. Consultation on *Te whakawhanake i te pūnaha ripoata taiao o Aotearoa – Improving New Zealand’s Environmental Reporting System* is welcomed by Te Uru Kahika. It is recognised that this consultation is just the start of the improvement process, and the regional sector looks forward to further involvement.

Discussion

17. Te Uru Kahika recognises that a nationally coordinated, well-performing environmental monitoring and reporting system is critical to inform Aotearoa New Zealand’s sustainable development, and to evaluate the effectiveness of our policies and plans to achieve this. It is recognised that while some parts of the current environmental reporting system are working well, there are also several areas that need improvement.
18. The submission focuses on three overarching issues:
 - a) firstly, that environmental reporting and management must give effect to Te Tiriti o Waitangi
 - b) secondly, that environmental reporting must be integrated into a wider system of environmental management
 - c) thirdly, wider co-ordination and resourcing are needed for the many organisations involved in environmental reporting.

Environmental reporting and management must give effect to Te Tiriti o Waitangi

19. Te Uru Kahika strongly supports the objective of strengthening Aotearoa New Zealand’s environmental reporting and environmental management to align with Te Tiriti, and acknowledges that positives steps are being taken in regard to recognition of mātauranga as a knowledge system, including its value for understanding environmental issues and generating innovative solutions.
20. The submission suggests consideration is given to how Government can provide for a more effective Treaty partnership in regard to environmental monitoring and reporting, including: how to embed Treaty partnership approaches through shared responsibilities and joint functions; how to recognise and preserve iwi and hapū rangatiratanga over taonga; and how to support iwi and hapū to build capacity and capability. Clearer direction is also sought in regard to how a more effective Treaty partnership would be operationalised, and whether there are options for innovative or new approaches to considering the incorporation of mātauranga into or alongside the existing framework.
21. It is acknowledged that important questions about Māori data sovereignty being asked through this consultation process. It is recommend that the Crown engage directly and more actively with iwi/hapū/Māori to partner and co-design a new environmental reporting framework and be open to consideration of a range of approaches and alternatives, which may look quite different from the current approach.

Environmental reporting must be integrated into a wider system of environmental management

22. Te Uru Kahika recognises the need to improve environmental reporting as a key component of Aotearoa New Zealand's environmental management system. In regard to mandating a response from the government to synthesis reports (Proposal 2 in the consultation document), the sector is generally supportive. It is however, recommended that this response should not only explain what the government has done or intends to do, but extend to evaluation of the effectiveness of any such actions. It is recommended that consideration be given of who should be responsible for evaluating the effectiveness of interventions, and how and when this should take place.

Wider co-ordination and resourcing are needed for the many organisations involved in environmental reporting

23. Te Uru Kahika appreciates that the consultation document focuses primarily on environmental reporting undertaken by MfE and StatsNZ under the ERA and, recognising their role, supports amendments to the ERA that will make their environmental reporting more effective and efficient.
24. However, the consultation document does not adequately explain that MfE and StatsNZ are nearly completely reliant on other organisations for the provision of environmental science and SoE data. This includes extensive data and information collected by the regional sector, Department of Conservation (DOC), Ministry of Primary Industries, Land Information New Zealand, or the New Zealand Transport Agency. Further, the consultation document is relatively silent on the substantial environmental monitoring and reporting performed by iwi/hapū, research institutes, industries, non-government organisations, and members of the public.
25. These organisations collect data and information for a range of purposes. Te Uru Kahika's submission raises concerns that the proposed amendments to the ERA will not address MfE's and StatsNZ's inability to align with, influence, or potentially fund the other organisations on which they critically rely for provision of SoE data and information. Establishing a set of core indicators (Proposal 9) will not create the mandate or resourcing for other organisations to collect the relevant data. Nor will strengthening mechanisms to collect data (Proposal 10) lead to better environmental reporting if those organisations have not made the measurements in the first place.
26. It is recommended that substantially more consideration and consultation be given into how the many organisations involved in environmental monitoring and reporting can be effectively aligned and resourced to produce an effective overall national environmental reporting system. This includes alignment of relevant legislation, much of which is presently undergoing reform, and better integration with Aotearoa New Zealand's science system and adequate support to ensure meaningful and standardised collection of data. Further, that appropriate resourcing (funding, staff capability and capacity) be provided to address identified gaps, noting that any additional monitoring and reporting that is beyond that which organisations are already performing, and where it is for central government purposes, should be funded by central government.

Financial considerations—LTP/Annual Plan

27. This memorandum and the associated recommendations are consistent with the Council's adopted Long-Term Plan and estimates. Any financial information included in this memorandum has been prepared in accordance with generally accepted accounting practice.

Policy considerations

28. This memorandum and the associated recommendations are consistent with the policy documents and positions adopted by this Council under various legislative frameworks including, but not restricted to, the *Local Government Act 2002*, the *Resource Management Act 1991* and the *Local Government Official Information and Meetings Act 1987*.

Iwi considerations

29. This memorandum and the associated recommendations are consistent with the Council's policy for the development of Māori capacity to contribute to decision-making processes (schedule 10 of the *Local Government Act 2002*) as outlined in the adopted long-term plan and/or annual plan. Similarly, iwi involvement in adopted work programmes has been recognised in the preparation of this memorandum.
30. In its submission, Te Uru Kahika requests that Government consider the key question of how to incorporate mātauranga and Te Ao Māori into environmental reporting and wider frameworks. Further, that the Crown adopt a more active 'partnership approach' in its engagement, both in relation to this kaupapa and more widely. The regional sector's Ngā Kairapu special interest group in particular, strongly emphasises the importance of active partnership.

Community considerations

31. This memorandum and the associated recommendations have considered the views of the community, interested and affected parties and those views have been recognised in the preparation of this memorandum.

Legal considerations

32. This memorandum and the associated recommendations comply with the appropriate statutory requirements imposed upon the Council.

Appendices/Attachments

Document 3041559: Te whakawhanake i te pūnaha ripoata taiao o Aotearoa Improving Aotearoa New Zealand's environmental reporting system: Proposed amendments to the Environmental Reporting Act 2015 Summary Document

Document 3041545: Te whakawhanake i te pūnaha ripoata taiao o Aotearoa Improving Aotearoa New Zealand's environmental reporting system: Proposed amendments to the Environmental Reporting Act 2015 Consultation Document

Document 3037378: Te Uru Kahika submission on improving Aotearoa New Zealand's environmental reporting system



Summary 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

The Ministry for the Environment is seeking feedback on proposals to strengthen the Environmental Reporting Act 2015.

While the Environmental Reporting Act (ERA) has made positive changes to the way we report on the environment, we need to extend its functionality and breadth so environmental reports have more impact.

The ERA made environmental reporting mandatory for the first time in New Zealand, ensuring that reporting occurs on a regular basis and can be trusted by the public as independent, fair and accurate.

Under the ERA, the Ministry and Stats NZ report on the state of different aspects of our environment every six months, and our environment as a whole every three years.

After almost two full cycles of reporting and a review of the environmental reporting system by the Parliamentary Commissioner for the Environment (PCE) in 2019, we have an opportunity to build on what we've learned to better report on what matters most and increase the influence environmental reporting has on decision-making.

By amending the ERA, we aim to:

- make reporting timelier, 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, by stronger inclusion of te ao Māori and mātauranga Māori
- help decision-makers identify and implement positive actions for our environment.

About the Environmental Reporting Act

The ERA provides the framework for independent, structured and regular reports on the state of Aotearoa New Zealand's environment. This helps us understand how New Zealand's environment is tracking and the impacts of our activities over time, which is vital for good decision-making.

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 requires the Ministry and Stats NZ to jointly produce and publish:

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

The most recent domain and synthesis reports to be published under the ERA are [Our air 2021](#) and [Environment Aotearoa 2019](#).

Why we're amending the Environmental Reporting Act

In contributing to and completing almost two full reporting cycles under the ERA, departments, experts and other agencies have found that report production could be improved so environmental reports have more impact.

While improvements continue to be made as each report is published, legislative change is now needed to allow a wider variety of reporting formats, additional tools and other data sources to be used.

In his 2019 report [Focusing Aotearoa New Zealand's environmental reporting system](#), the PCE highlighted 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."

Proposed amendments are an important first step towards the system shift needed to address issues in the broader environmental monitoring and reporting system. National environmental reporting will be crucial to the implementation and operation of the new resource management system.

Integrating te ao Māori

Beyond the 10 proposals listed below, we're also working with Māori to identify changes that give a stronger voice to te ao Māori within environmental reporting. This includes exploring how mātauranga Māori (Māori knowledge), data, evidence, knowledge and science could be shared, collected, managed and protected in environmental reporting.

This will improve the coverage and effectiveness of environmental reporting and make it more meaningful and useful for Māori as well as broader communities, local and central government, and other organisations. This work could result in changes to current proposals and additional amendments being developed.

Proposed amendments

Informed by the PCE's recommendations, the Resource Management Review Panel's 2020 report *New Directions for Resource Management in Aotearoa New Zealand*, and findings from previous environmental reports, these proposed amendments will provide a stronger foundation to ensure we understand our environment and the impacts we're having on it to support good decision-making.

You can find out more about each proposal, including alternative options, costs, benefits and risks, in the full [consultation document](#).

Proposal	Rationale
1. Clarify the purpose of environmental reporting	Being clearer about why we report on the state of the environment and what the reports aim to achieve will better set the scene for interpreting and implementing the ERA.
2. Mandate a government response to synthesis reports	A mandatory government response will increase transparency and accountability for addressing environmental issues, closing the loop between reporting and action taken.
3. Add drivers and outlooks to the reporting framework	Extending the current pressure-state-impact framework to include drivers and outlooks will give a more complete view of environmental issues.
4. Adjust roles and responsibilities	Clearly defining the joint roles and responsibilities of the Secretary for the Environment and the Government Statistician will reduce overlap and ensure that each organisation's expertise is utilised.
5. Mandate a standing advisory panel	A mandated standing advisory panel will guarantee independent expert advice is provided across a range of perspectives and disciplines.
6. Replace environmental domains with cross-domain themes	Cross-domain themes will better represent the complexity and interrelation of environmental systems and better reflect a holistic te ao Māori view of te taiao.
7. Reduce the frequency of synthesis reports to six-yearly	As some rates of environmental change can be slow, moving to six-yearly cycle will achieve a more appropriate balance between reporting timeliness, rates of change and seeing connections between changes.
8. Replace domain reports with one commentary each year	Producing one theme-based commentary report per year will make the reporting cycle less resource intensive, encourage more in-depth analysis and reduce the risk of repetitive reporting.
9. Establish a set of core environmental indicators	Defining core environmental indicators in the regulations will provide a directive for implementing enduring core indicators, which will improve data collection abilities.
10. Strengthen the mechanisms for collecting data	New data collection provisions will help ensure the reporting programme has the data it needs to create a more comprehensive picture of the environment on an enduring basis.

Have your say

For full details on the proposals, the problems we are trying to solve and the options we considered, please read the full [consultation document](#).

Share your feedback until **5pm on Friday 18 March 2022** by:

- using our online survey to answer some or all of the questions set out in the consultation document
- writing your own submission.

For more information, visit consult.environment.govt.nz/environment/proposed-amendments-environmental-reporting-act/.

If you have any questions about the submission process, contact the team at era.consultation@mfe.govt.nz.

Next steps

We will analyse all the feedback we receive to inform final recommendations to the Government.

Once proposals are agreed, legislation will be drafted and an amendment to the ERA (through an amendment bill) will be introduced to Parliament, likely at the end of 2022.

A bill passes through several stages before it can become an Act of Parliament. You can find out more about the legislative process on the [New Zealand Parliament website](#).

Some issues may also be addressed through non-legislative change.





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.

A handwritten signature in black ink, which appears to read 'James Shaw'.

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

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.

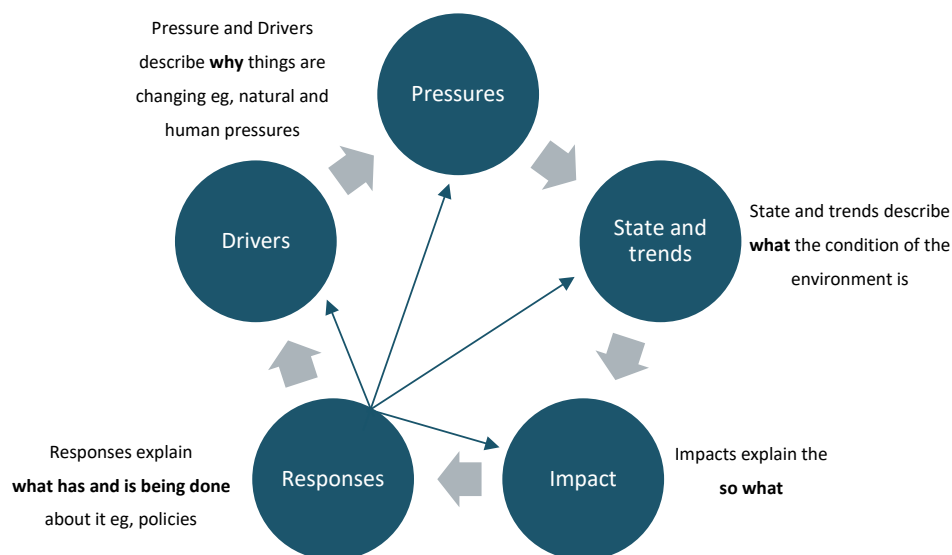
A key feature of the ERA is that it goes beyond reporting on the biophysical state of the environment. It covers dependencies and impacts related to social, economic, and cultural use and management of our natural resources.

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 ERA⁸
 - 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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
Marine			Coastal waters Estuaries
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 <i>Environment Aotearoa 2019</i> (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 authority⁹ 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)			
Proposal 1: Clarify the purpose of environmental reporting	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				
	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.				
Proposal 2: Mandate a government response to synthesis reports	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.				
	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.				
Proposal 3: Add drivers and outlooks to the reporting framework	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.				
	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: Benefits				
	<p>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.</p> <p>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.</p>				
	Option 1: Risks				
	<p>By nature, future outlooks include an element of uncertainty, reports will need to stipulate where assumptions/predictions have been made.</p> <p>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.</p>				
Proposal	Estimated additional funding (\$m)				
Proposal 4: Adjust roles and responsibilities	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				
	<p>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.</p> <p>Note that the extent of greater cost efficiency may be minimal unless substantial overlap currently exists.</p>				
	Option 1: Risks				
	<p>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.</p> <p>Adjusting roles may risk some of the existing procurements and relationships with data providers and the science community.</p> <p>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.</p> <p>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.</p>				

Proposal	Estimated additional funding (\$m)				
	Stats NZ		Ministry for the Environment		Other organisations
Proposal 5: Mandate a standing advisory panel	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
	\$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				
Proposal 6: Replace environmental domains with cross-domain themes	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.				
Proposal 6: Replace environmental domains with cross-domain themes	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
Proposal 6: Replace environmental domains with cross-domain themes	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
	\$0.1	\$0	\$0.1	\$0	\$0.2 upfront only
	There is an upfront deadweight cost of Tax of \$0.1m.				
	Option 1: Benefits				
Proposal 6: Replace environmental domains with cross-domain themes	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.				
Proposal 6: Replace environmental domains with cross-domain themes	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
Proposal 7: Reduce the frequency of synthesis reports to six-yearly	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
	\$0	\$0	\$0	\$0	\$0
	Option 1: Benefits				
Proposal 8: Replace domain reports with one commentary each year	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				
Proposal 8: Replace domain reports with one commentary each year	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.				
	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.				
Proposal 8: Replace domain reports with one commentary each year	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.				
Proposal 8: Replace domain reports with one commentary each year	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.				
	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.				

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
Proposal 9: Establish a set of core environmental indicators	\$0	\$1.7	\$1.6	\$1.2	\$2.8
	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				
Proposal 10: Strengthen the mechanisms for collecting data	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.				
	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 Rākahautū 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: <i>Status quo</i>	~	✗	✓ ✓	~	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: <i>Status quo</i>	✓	✗	✓✓	~	2
Where the response should appear:	✓✓	✓✓	~	✓	5
Option 1: Adopt the PCE's recommendation to require a separate response after each synthesis report's publication					
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:	✓✓	✓✓	~	✓✓	6
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					
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: <i>Status quo</i>	✓	✓	✓✓	✓	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: <i>Status quo</i>	~	✓	~	~	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: <i>Status quo</i>	✓	✓	~	~	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: <i>Status quo</i>	✓	✓ ✓	✓ ✓	✓	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: <i>Status quo</i> 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: <i>Status quo</i> 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: <i>Status quo</i>	✓	✓	✓	✓	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: <i>Status quo</i>	✗ ✗	✗ ✗	✓ ✓	✗ ✗	-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 up 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 our 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, <i>New Directions for Resource Management in New Zealand</i> .
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 <i>Environment Aotearoa</i> 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.

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25 March 2022

Sent via email to: era.consultation@mfe.govt.nz

To whom it may concern

Please find following an amended submission by Te Uru Kahika – Regional and Unitary Councils Aotearoa on *Te whakawhanake i te pūnaha ripoata taiao o Aotearoa – Improving Aotearoa New Zealand's Environmental Reporting System*.

This submission replaces the version sent to you on 18 March 2022.

The regional sector looks forward to ongoing dialogue with the Ministry on this very important topic area. As a sector, Te Uru Kahika is both a provider and consumer of environmental reporting data and insights, and we are deeply committed to the success of any reform.

Please note the contact address for the submission is Dr Tim Davie, Director of Science at Environment Canterbury, on behalf of the Resource Managers Group of Regional and Unitary Councils.

Nāku iti noa, nā

Michael McCartney
CONVENOR
Regional and Unitary Chief Executives' Group
Te Uru Kahika

pp

Executive Policy Adviser





SUBMISSION ON IMPROVING AOTEAROA NEW ZEALAND'S ENVIRONMENTAL REPORTING SYSTEM

Date: 25 March 2022

To: Ministry for the Environment (era.consultation@mfe.govt.nz)

From: Te Uru Kahika – Regional and Unitary Councils Aotearoa
c/o Horizons Regional Council
Private Bag 11025
Manawatū Mail Centre
Palmerston North 4442

Contact: Dr Tim Davie (tim.davie@ecan.govt.nz)
Director of Science at Environment Canterbury on behalf of the Resource Managers Group of Regional and Unitary Councils.

INTRODUCTION

1. Te Uru Kahika represents the sixteen regional councils and unitary authorities comprising Aotearoa New Zealand's regional sector. The name Te Uru Kahika reflects the work and vision of the regional sector: *thriving environments and thriving communities*.
2. Collectively, the sixteen regional councils and unitary authorities have responsibilities for integrated management of land, air and water resources, supporting biodiversity and biosecurity, providing for regional transport services, and building more resilient communities in the face of climate change and natural hazards. To fulfil these responsibilities, regional authorities engage extensively with tangata whenua and communities, and we prioritise maintaining strong, on-going relationships.
3. Fulfilment of the above-listed responsibilities is underpinned by the regional sector's extensive scientific activities and expertise. Collective science expenditure by the regional sector exceeds \$70 million per year. We employ hundreds of scientists, engineers, planners, and policy experts, including dozens of PhDs. For decades, our network of Special Interest Groups (SIGs) has facilitated collaboration and leverage of science, policy and planning activities across the country. We provide guidance on research needs to the wider science system through our overarching science strategy¹ and SIG science strategies². Regional sector scientists also play an integrating role and collaborate extensively on research programmes led by Crown Research Institutes (CRIs), Independent Research Organisations (IROs) and universities.

¹ See <https://www.envirolink.govt.nz/assets/Research-for-Resource-Management-2020.pdf>

² See <https://www.envirolink.govt.nz/research-strategy/>



4. Reporting on Aotearoa New Zealand's environment is of critical importance to us fulfilling our functions. Accordingly, the regional sector undertakes much of Aotearoa New Zealand's state of the environment (SoE) monitoring and reporting. For example, regional authorities use standardised methods³ for on-going regular monitoring of the quality of air, soil, surface water, groundwater and coastal environments at over 1,000 sites across the country, with a growing majority of the data made freely available⁴.
5. Te Uru Kahika welcomes this consultation on *Te whakawhanake i te pūnaha rīpoata taiao o Aotearoa – Improving New Zealand's Environmental Reporting System*. A nationally coordinated, well-performing environmental monitoring and reporting system is critical to inform Aotearoa New Zealand's sustainable development, and to evaluate the effectiveness of our policies and plans to achieve this. While some parts of the current environmental reporting system are working well, there are also several areas that need improvement⁵.
6. Te Uru Kahika recognises that this consultation is just the start of the improvement process, and we look forward to further involvement. To this end, we offer feedback on two overall process-related issues:
 - a. In considering the key question of how to incorporate mātauranga and Te Ao Māori into environmental reporting and wider frameworks, we highlight the importance of engagement and partnership with iwi/hapū/Māori as well as the many mātauranga specialist researchers and scientists in our country. By its very nature, mātauranga is intrinsically embedded within hapū and iwi, who require an interactive, on-going process for engagement, along with helpful information and resourcing. We strongly recommend that the Crown adopt a more active 'partnership approach' in its engagement in relation to this kaupapa and more widely. The regional sector's Ngā Kairapu⁶ SIG in particular strongly emphasises the importance of active partnership.
 - b. We would also like to emphasise the challenges faced by the regional sector, iwi/hapū and communities, in responding to the many central government proposals presently out for consultation. To achieve their intended purposes, these individual consultations and proposals must be better coordinated, integrated and connected. We acknowledge that joining up these many consultations will be a challenge for central government, but we caution that rushing these processes with siloed consultations will not result in the best overall outcomes. As just one particular example, there are key relationships between the proposed changes to Aotearoa New Zealand's environmental reporting system and implementation of the National

³ See National Environmental Monitoring Standards (<https://www.nems.org.nz/>)

⁴ See Land Air Water Aotearoa (www.lawa.org.nz) and regional authorities' environmental reports.

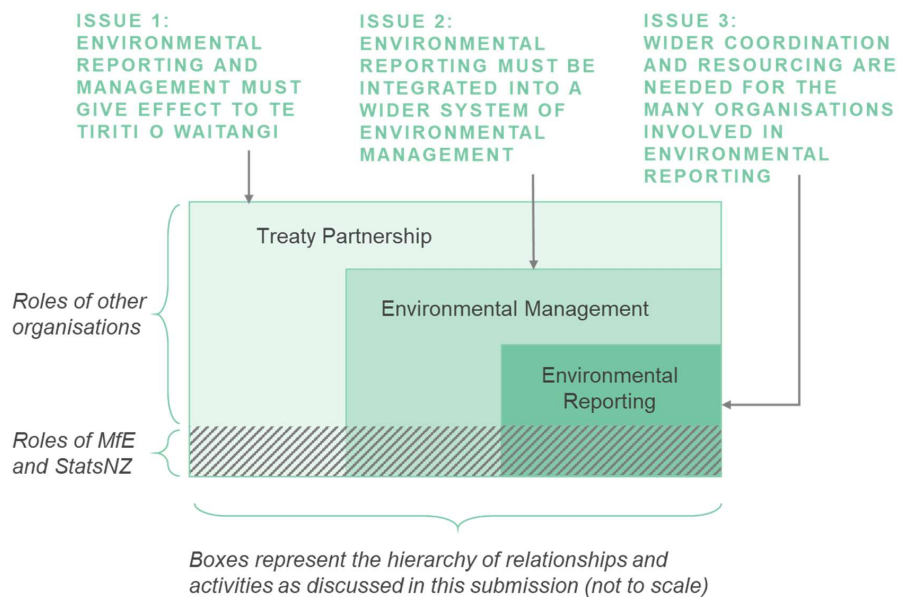
⁵ See the Parliamentary Commissioner for the Environment's report *Focusing Aotearoa New Zealand's Environmental Reporting System*.

⁶ Ngā Kairapu is the Māori Special Interest Group within Te Uru Kahika. Ngā Kairapu members work within the sixteen regional and unitary councils, and, with many different 'hats' that often include a strong connection to iwi and hapū, bring a unique perspective to environmental issues. Ngā Kairapu has knowledge of and skills to advance Kaupapa Māori, established networks and connections across councils, direct experience as iwi-Māori relationship and engagement champions, and knowledge of and understanding of Te Ao Māori me ōna tikanga.



Policy Statement for Freshwater Management (NPS-FM), for which regional authorities are already working with tangata whenua at the Freshwater Management Unit level. We reiterate the need to ensure these workstreams are well integrated.

7. The purpose of this submission is to provide a collective high-level view on the consultation document and the proposed amendments to the Environmental Reporting Act (ERA) 2015. This submission does not respond to the individual questions in the consultation document. Such input is provided through the submissions from individual regional authorities.
8. Our submission focuses on three overarching issues as summarised in the figure below and discussed in the remainder this document, using the following definitions to assist framing:
- a. *Environmental reporting* involves monitoring environmental state and trends, analysing and interpreting these measurements, and disseminating the findings through reports, web pages and other channels.
 - b. *Environmental management* comprises a wide range of activities, including developing and implementing policies, plans and other interventions, to manage the interaction and impact of societies within and on the environment. Environmental reporting is one component of environmental management.
 - c. *Treaty partnership* refers to the partnership between the Crown and Māori in accord with Te Tiriti o Waitangi and its principles. Environmental management is one component of this, but Treaty obligations are substantially broader.



ISSUE 1: ENVIRONMENTAL REPORTING AND MANAGEMENT MUST GIVE EFFECT TO TE TIRITI O WAITANGI

9. Te Uru Kahika strongly supports the objective of strengthening Aotearoa New Zealand's environmental reporting and environmental management to align with Te Tiriti. We acknowledge the importance of tikanga and the worldviews of Te Ao Māori. We recognise the distinctness and value of mātauranga as a knowledge system, including its value for understanding environmental issues and generating innovative solutions. We note that positive improvements in environmental reporting and management are already being made in these regards, but there is need for more effort, resourcing, and capability-building in these spaces. We acknowledge that enhancing the visibility of mātauranga is likely to have benefits for other processes, including the increasing weight given to mātauranga in court hearings or within the new processes and systems being set through the reform of the Resource Management Act (RMA) 1991.
10. We are concerned that the consultation document has a relatively narrow focus on the environmental reporting system (cf. Issue 3) and therefore overlooks the Crown's Treaty obligations in relation to environmental management (cf. Issue 2), for which reporting is just one component. Considerations for more effective Treaty partnership include:
 - a. How to embed Treaty partnership approaches through shared responsibilities and joint functions in relation to environmental management in the widest sense;
 - b. How to recognise and preserve iwi and hapū rangatiratanga over taonga; and
 - c. How support iwi and hapū to build capacity and capability in relation to the above-listed roles and objectives.
11. With specific regard to environmental reporting, we are concerned that the consultation document gives relatively little specific detail of both how a more effective Treaty partnership would be operationalised, and whether there are options for innovative or new approaches to considering the incorporation of mātauranga into or alongside the existing framework. Such principles and details will need to be explored and developed through direct engagement with iwi/hapū/Māori. It is they who hold rangatiratanga to say how mātauranga-informed kaitiakitanga can best be reflected in the design of the environmental reporting system and, importantly, how takiwā- and rohe-specific needs can be accommodated. Considerations may include:
 - a. Working with iwi/hapū/Māori to co-design new environmental reporting frameworks, key principles and mechanisms⁷, while accommodating differences in iwi/hapū perspectives (i.e., recognising there is no single universal Te Ao Māori world view);

⁷ Examples could include frameworks that treat the environment as one interconnected system, thus embodying the practical application of Te Ao Māori management of the physical and natural world, and/or the incorporation of concepts such as maramataka.



- b. Addressing matters related to ownership/custodianship of mātauranga and sovereignty of iwi/hapū information and data, while enabling such knowledge to inform environmental reporting as appropriate; and
- c. Providing appropriate resourcing to build capability and capacity and support iwi/hapū/Māori to engage with and participate in the environmental reporting system.

12. In relation to iwi/hapū data, information and mātauranga:

- a. Te Uru Kahika is pleased to see very important questions about Māori data sovereignty being asked (cf. Paragraph 11.b). We recommend that the Crown works carefully with iwi and hapū, and iwi entities that are already grappling with data collection and protection issues⁸. Topics that need consideration include: data sovereignty and intellectual property; data capture and use; data infrastructure and accessibility; the need for mana-enhancing data-informed narrative and reporting hierarchies; and the role of different parties including the Ministry for the Environment (MfE) and Statistics New Zealand (StatsNZ).
- b. We note that some publicly available information already exists, for example within Iwi and Hapū Management Plans and Cultural Impact Assessments, and we suggest that some of this could be considered for environmental reporting. The NPS-FM is already requiring the regional sector to work with iwi/hapū, so regional authorities will also have some of this information, including mātauranga, although we reiterate that this is not ours to share without express permissions from iwi, hapū or whānau.
- c. We note that many iwi and hapū have issues of trust when it comes to environmental data and are likely to want to carry out their own monitoring, and have their own ways of collecting, storing and describing the state of the environment. Provision and funding for monitoring approaches and systems that are co-designed by hapū and iwi, to be used when and how they want, will be a significant pathway to improving environmental reporting and environmental management in Aotearoa New Zealand.

13. We recommend that the Crown engages directly and more actively with iwi/hapū/Māori to partner and co-design a new environmental reporting framework (cf. Paragraph 8.a) and be open to consideration of a range of approaches and alternatives, which may look quite different from the current approaches – for example a parallel mātauranga-based reporting system, a re-creation of the current system, and/or a joining up of the many fragmented aspects of data collection, interpretation, narrative and use.

14. Finally, in its engagement iwi/hapū/Māori in relation to the environmental reporting system, we encourage the Crown to take a broader perspective on the relationship between

⁸ We recommend looking at the following relevant examples: Mana Ōrite Work Programme developed between StatsNZ and the Data Iwi Leaders Group of the National Iwi Chairs Forum; the Integrated National Farm Data Platform (INFDP) project; Te Mana Raraunga (Māori Data Sovereignty roopu); the Moana project (www.moanaproject.org), and consultants that have developed data repositories dealing with iwi/hapū information (e.g. Takiwa Ltd).



environmental reporting and management, and its Treaty obligations more widely (cf. Paragraph 8.c).

ISSUE 2: ENVIRONMENTAL REPORTING MUST BE INTEGRATED INTO A WIDER SYSTEM OF ENVIRONMENTAL MANAGEMENT

15. For the purpose of this submission, we envision an environmental management system as involving:

- a. Monitoring and reporting on the state of the environment;
- b. Taking action through plans, policies, initiatives or other interventions to remediate, mitigate or adapt to environmental issues; and
- c. Evaluating the effectiveness of any such interventions to determine whether they are working and, if not, to improve or replace them.

These steps are not linear, but cyclical, such that step 15.c feeds back into step 15.a.

16. We appreciate that much of this consultation document and the proposed amendments to the ERA focuses on improving the monitoring and reporting on the state of the environment (as per Paragraph 15.a). As discussed under Issue 3 below, Te Uru Kahika recognises the need to improve environmental reporting as a key component of Aotearoa New Zealand's environmental management system.

17. We acknowledge that mandating a response from the government (Proposal 2 in the consultation document) will make a material improvement in considering what policies, plans, initiatives or other interventions could be implemented in response to environmental issues (as per Paragraph 15.b). The Parliamentary Commissioner for the Environment (PCE) has previously recommended that a government response may include comment on existing or planned policies, or what policy analysis the government proposes to take to identify what policies or initiatives may be needed. We note however that Proposal 2 in the consultation document does not actually specify what must or should be included in the government's response – whether that be the components recommended by the PCE or anything else. We therefore recommend that Proposal 2 be amended to specify what content should be included in a government response under the ERA.

18. Of key importance, we interpret that there is no part of the consultation document that covers evaluation to determine whether whatever actions were taken through or outside the government's response are actually working to deliver the desired outcomes (as per Paragraph 15.c). This shortcoming arises because:

- a. Under the current ERA, reporting on state of the environment excludes evaluation of the effectiveness of government responses. This exclusion is intended to ensure that environmental reporting remains independent of the government of the day. This exclusion would remain if reports are expanded to include drivers and outlooks (the preferred option for Proposal 3) because *responses* would be specifically excluded.



- b. Introduction of a government response (Proposal 2), if based on the structure recommended by the PCE, would explain what the government has done or intends to do, but would not extend to evaluation of the effectiveness of any such actions.
 - c. The monitoring system will not assist in addressing policy/plan effectiveness unless the core indicators (cf. Proposal 9) can be easily tied to policy. This may be challenging, but effective and integrated environmental management will require more than just reporting on a set of state, pressure, and/or driver indicators.
- 19. Under the above interpretation, Aotearoa New Zealand's environmental management system will still have a critical weakness in relation to evaluation of its policies, plans and other interventions that are intended to address environmental issues. This weakness would not be addressed by the proposed amendments to the ERA.
- 20. We emphasise that in some cases, evaluating the effectiveness of environmental policies, plans or other interventions might require targeted investigations to fully elucidate cause-effect relationships. Where required, such investigations must be supported through the environmental management system even where, by necessity, they are conducted at a local not national scale, or require measurement of parameters other than the core indicators.
- 21. We recommend that consideration be given of who should be responsible for evaluating the effectiveness of interventions (as per Paragraph 15.c), and how and when this should take place. Choices include:
 - a. Adopting Option 2 under Proposal 3, so that reporting on *responses* is incorporated into environmental reporting;
 - b. Requiring analysis of the effectiveness of policies, plans and other interventions as part of a government response under Proposal 2; and/or
 - c. Assigning another entity (such as the PCE) the requirement to undertake regular evaluations of the effectiveness of environmental policies, plans and other interventions.

We are unable to comment on the merit of these options until they have been scoped and included in the cost-benefit analysis.

ISSUE 3: WIDER COORDINATION AND RESOURCING ARE NEEDED FOR THE MANY ORGANISATIONS INVOLVED IN ENVIRONMENTAL REPORTING

- 22. We appreciate that the consultation document focuses primarily on environmental reporting undertaken by MfE and StatsNZ under the ERA. Te Uru Kahika recognises the roles played by these two organisations and supports amendments to the ERA that will make their environmental reporting more effective and efficient.



23. However, the consultation document doesn't adequately explain that MfE and StatsNZ are nearly completely reliant on other organisations for the provision of environmental science and SoE data. For example:
- a. There is little mention of the environmental monitoring and reporting activities of regional authorities (refer Paragraph 4), which in fact provide a core information source for MfE and StatsNZ.
 - b. While the consultation document describes the role of the Department of Conservation (DOC) in reporting on the extinction threat to indigenous species, it provides little representation of DOC's other substantial monitoring and reporting activities⁹, nor those of other government departments such as the Ministry of Primary Industries, Land Information New Zealand, or the New Zealand Transport Agency.
 - c. The consultation document is relatively silent on the substantial environmental monitoring and reporting performed by iwi/hapū, research institutes, industries, NGOs, and members of the public.
24. These other organisations collect SoE data for their own purposes, which may not be aligned with or governed by the ERA, and which MfE and StatsNZ have relatively little ability to influence. For example:
- a. Regional authorities monitor the state of the environment under the RMA (not the ERA), in part to evaluate the effectiveness of their plans and policies. While regional authorities collaborate to standardise their monitoring methods and approaches, their individual monitoring activities are not necessarily designed to provide a representative national perspective on state of the environment under the ERA. For example, the location of regional authority water quality monitoring sites is necessarily biased towards areas with the greatest human impact, in order to evaluate the effectiveness of plans and policies to address those impacts. The identification, monitoring, and reporting of sites with low impact (e.g., pristine alpine areas) is necessary for national reporting but comes at a high cost and little local benefit to rates payers.
 - b. Government departments other than MfE and StatsNZ undertake SoE monitoring and reporting outside the ERA, for example DOC under the Conservation Act 1987 and MPI (e.g. Fisheries NZ) under the Fisheries Act 1996.
 - c. Research institutes conduct environmental monitoring and reporting in line with their respective goals, which may be defined at the organisational level (such as in a CRI's Statement of Core Purpose) and/or for individual research programmes¹⁰, and which may not necessarily align with national SoE reporting needs.

⁹ See <https://www.doc.govt.nz/our-work/monitoring/>

¹⁰ For example, MBIE-funded Nationally Significant Databases and Collections.



- d. Other groups or organisations, such as iwi/hapū, NGOs, industries and communities, undertake environmental monitoring and reporting under different legislation or may not be acting under the specific direction of any particular legislation at all.
25. It is also important to recognise the organisations that collect SoE data are faced with range of constraints.
- a. Funding is one of the most important constraints. This is the case for regional authorities, which undertake environmental monitoring and reporting, balanced against other activities and priorities, as permitted by their respective rates payer bases. Financial constraints are also a well-recognised challenge for environmental monitoring by research institutes¹¹. Question 42 in the consultation documents asks: *“Do you foresee any problems with the proposal to include provisions in the ERA to require data for national environmental reporting?”* Funding is certainly a potential problem that needs to be well thought out and agreed by all parties involved.
 - b. Staffing constraints are also a key issue for many organisations, which may struggle to recruit and retain environmental monitoring scientists and technicians. There is also a critical shortage of experts in Te Ao Māori and mātauranga.
 - c. For some types of data, there are multiple organisations involved in SoE monitoring and reporting but a lack of clarity on how they should partner and/or who has the mandate for collecting what types of information. This can create duplication, competition and/or vested interests that may be challenging to sort out.
 - d. There are also some environmental domains and types of data that are especially challenging to monitor. A case in point is marine monitoring and spatial planning, which are heavily defined by resource-intensive data that goes beyond regulatory boundaries. While marine monitoring and spatial planning would benefit from central government funding, it also needs to include a local and regional lens to reflect place-based relationships with tangata whenua.
26. Te Uru Kahika is concerned that the proposed amendments to the ERA will not address MfE's and StatsNZ's inability to align with, influence, or potentially fund the other organisations on which they critically rely for provision of SoE data and information. Establishing a set of core indicators (Proposal 9) will not create the mandate or resourcing for other organisations to collect the relevant data. Strengthening mechanisms to collect data (Proposal 10) will not lead to better environmental reporting if those organisations haven't made the measurements in the first place.
27. We are especially concerned that the cost-benefit analysis presented in the consultation document has substantially underestimated the resourcing required for SoE monitoring and reporting by organisations other than MfE and StatsNZ. For example, there will likely be a new indicators and new sites that need to be monitored, which may require new staff,

¹¹ For example, as noted in MBIE's update report as part of its 2019 review of Nationally Significant Databases and Collections.



equipment and infrastructure. The consultation document doesn't acknowledge the significant effort that is required to establish standardised methods for measuring these new and existing indicators, for quality assurance and curation of the data, and for developing appropriate scientific methods for summarising and evaluating the results. Regional authorities have worked extensively on these matters and would welcome the opportunity to offer solutions and advice.

28. We recommend that substantially more consideration and consultation be given into how the many organisations involved in environmental monitoring and reporting can be effectively aligned and resourced to produce an effective overall national environmental reporting system. This will require:
- a. Alignment of relevant legislation, much of which is presently undergoing reform;
 - b. Better integration with Aotearoa New Zealand's science system to timely provision of methods and approaches for monitoring and reporting to ensure the availability of tools to monitor and report on the environment across all domains – in an ecologically meaningful and standardised way, over time and at differing spatial scales; and
 - c. Appropriate resourcing (funding, staff capability and capacity) to address the existing shortfalls in the system and then to fill knowledge gaps¹² – noting that any additional monitoring and reporting that is beyond that which organisations are already performing, and where it is for central government purposes, should be funded by central government.

COMMENT ON CROSS-DOMAIN THEMES AND CORE INDICATORS

29. Question 29 in the consultation document concerns cross domain themes. We are in support of this proposal as it promotes a holistic view of environmental management and if done well it would make environmental data more available and easier to understand for the general public. We do note that with this approach there is a danger of losing detail in particular issues and there will be times when reporting on separate domains may be more useful.
30. Question 38 in the consultation document concerns the use of core environmental indicators. Te Uru Kahika considers continuity of indicators is important in tracking long term trends, as is selecting the right suite of indicators. The indicators also need to be reflexive and adaptable and hence we consider it would be better to set in legislation that suites of core indicators are to be developed before the next synthesis report rather than specify these in the Environmental Reporting Act. New indicators may also require new data collection, and this will need to be resourced or it will just be a repeat of the current situation.

¹² See Part 3, *Towards a better understanding of our environment*, in Environment Aotearoa 2019 (<https://environment.govt.nz/publications/environment-aotearoa-2019/>).



CONCLUSION

31. Te Uru Kahika thanks you for the opportunity to comment on this consultation document. We do not wish to override or contradict the individual submissions lodged by our member councils, whose submissions are more detailed and provide contexts directly relevant to their individual rohe. Hence this submission attempts to capture overarching key issues.
32. We support the overall objective of improving Aotearoa New Zealand's environmental reporting system. We also support the higher-level aim of improving environmental management more broadly, and the overarching objective of effective Treaty partnership.
33. Te Uru Kahika is well positioned to inform on these matters so would welcome the opportunity for further discussion on the points raised in this submission. We look forward to being involved in the next steps of this consultation.

This ends our submission.





Date: 26 April 2022

Subject: **Regional sector submission on Te Ara Paerangi - Future Pathways Green Paper**

Approved by: A J Matthews, Director - Environment Quality
S J Ruru, Chief Executive

Document: 3037374

Purpose

1. The purpose of this memorandum is to update Committee members on a recent submission by Te Uru Kahika – Regional and Unitary Councils Aotearoa in response to the Ministry of Business, Innovation and Employment (MBIE) *Te Ara Paerangi - Future Pathways Green Paper*.

Executive summary

2. Government has recently engaged on a number of proposed changes to the science system, including responding to MBIE's *Te Ara Paerangi - Future Pathways Green Paper* which seeks to create a "modern, future-focussed research system for New Zealand". Views on the issues faced in the current system, along with ideas and opportunities to improve it, were recently sought through submissions and feedback. The green paper was published in October 2020, and submissions closed 16 March 2022. A copy of the green paper is provided in Appendix A.
3. Te Uru Kahika represents the sixteen regional councils and unitary authorities comprising Aotearoa New Zealand's regional sector; major producers and end-users of science, and a key part of the nation's research, science and innovation (RSI) system. Feedback to MBIE was provided by Te Uru Kahika via the submission provided in Appendix B and summarised in this memorandum.
4. Te Uru Kahika's submission recognises that some parts of our RSI system work well. New Zealand's RSI system is producing some excellent science in areas of importance to the nation such as climate change, freshwater and biodiversity. Through mechanisms such as the National Science Challenges, collaborations between regional sector scientists and the wider RSI system are well supported. There is an emphasis on building relationships between scientists and science end-users, as well as a growing emphasis on mātauranga and te ao Māori.
5. It is however, acknowledged that there are areas that require improvement. For example, under-resourcing of national environmental monitoring and lack of emphasis on applied science have resulted in key information gaps which, if adequately

addressed, could assist decision-makers in developing robust responses to a range of environmental challenges - including freshwater and biodiversity. While collaboration is encouraged by the current system, competition for funding has resulted in overlap between research institutions and inefficiencies in delivery. Funding mechanisms available to researchers and end-users such as regional councils are frequently altered, removed and introduced with lack of clarity around what is required to successfully obtain funding.

6. Te Uru Kahika provides feedback on the six main areas presented for discussion: (1) Research priorities; (2) Te Tiriti, mātauranga Māori and Māori aspirations; (3) Funding; (4) Institutions; (5) Research workforce; and (6) Infrastructure. Further detail around each of these main areas is summarised in the discussion section of this memorandum.

Recommendations

That the Taranaki Regional Council:

- a) receives the memorandum '*Regional sector submission in response to proposed changes to the Environmental Reporting System*'
- b) notes the submission and recommendations of Te Uru Kahika - Regional and Unitary Councils Aotearoa in regard to the Te Ara Paerangi - Future Pathways Green Paper, a copy of which is provided in Appendix B.

Background

7. Government has recently engaged on a number of proposed changes to the science system, including changes to the Environmental Reporting Act (ERA) and changes to Aotearoa New Zealand's research, science and innovation (RSI) sector. These proposed changes need to be considered within the broader scope of Government's step-change in the range of policy approaches - spanning areas such as freshwater, biodiversity, and Resource Management reform.
8. A recent 2021 report, *Te Pae Kahurangi - Positioning Crown Research Institutes to collectively and respectively meet New Zealand's current and future needs*, identified a number of issues with the science system as it is currently designed. For example, the system incentivises fragmentation and unproductive competition, while struggling to adapt to changing national needs.
9. In this green paper, MBIE states that its vision is to create a "modern, future-focussed research system for New Zealand". Views on the issues faced in the current system, along with ideas and opportunities to improve it were recently sought through submissions and feedback. The green paper was published in October 2020, and submissions closed 16 March 2022.

Discussion

10. It is the view of Te Uru Kahika that some parts of our RSI system work well. New Zealand's RSI system is producing some excellent science in areas of importance to the nation such as climate change, freshwater and biodiversity. Through mechanisms such as the National Science Challenges, collaborations between regional sector scientists and the wider RSI system are well supported. There is an emphasis on building relationships between scientists and science end-users, as well as a growing emphasis on mātauranga and te ao Māori.

11. There are however, areas that require improvement. Under-resourcing of national environmental monitoring and lack of emphasis on applied science have resulted in key information gaps which, if adequately addressed, could assist decision-makers in developing robust responses to a range of environmental challenges - including freshwater and biodiversity. While collaboration is encouraged by the current system, competition for funding has resulted in overlap between research institutions and inefficiencies in delivery. Funding mechanisms available to researchers and end-users such as regional councils are frequently altered, removed and introduced with lack of clarity around what is required to successfully obtain funding.
12. New Zealand's 16 regional and unitary authorities are major producers and end-users of science, and a key part of the nation's RSI system. In 2019, the Regional Sector's Resource Managers Group (RMG) conducted a review of New Zealand's RSI system in 2019 in response to discussion that it was not serving regional authorities as well as it used to. This review identified a number of opportunities to improve the current system and the findings have been taken into consideration as part of Te Uru Kahika's submission.

Research priorities

13. The green paper explored the role that national research priorities could play in focusing research activities and concentrating resources towards achieving national goals. Areas of discussion included how those priorities could be decided and designed; and how priorities could be governed and operationalised - including how their establishment might affect the RSI workforce.
14. Te Uru Kahika supports development of a set of national research priorities, but agree that underpinning principles must be jointly developed before any priorities are set. It is noted that the relative importance of national research priorities may vary from place to place, so delivery on them will require well-coordinated effort from within and outside the RSI system.

Te Tiriti, mātauranga Māori and Māori aspirations

15. MBIE sought feedback on how the research system can best honour Te Tiriti obligations and opportunities, give life to Māori research aspirations and enable mātauranga Māori. Specific questions were framed around Māori preferences for engagement, thoughts on how mātauranga Māori can be better enabled and protected, and sought views on the formation of regionally-based Māori knowledge hubs.
16. Te Uru Kahika supports a shift to a Tiriti-based RSI system. This may look very different to the present system, and take time to design and implement. The regional sector supports nearer-term modifications to the RSI system to increase engagement and outcomes for Māori, and acknowledges that resourcing for Māori to engage with and within the RSI system is particularly lacking. As highlighted in the Future Pathways Green Paper, and other documents, the inclusion of mātauranga Māori and te ao Māori is important and requires much greater emphasis and effort to embed across the whole RSI system.

Funding

17. The paper explores potential ways to reshape the RSI funding system for the future. This includes how funding can be used to give effect to national priorities, reduce unproductive competition, and ensure our institutions can respond to emerging opportunities. Questions were framed around how core functions of the RSI system are

decided, and funded, and whether introducing a base grant funding model might improve stability and resilience for organisations in the research system.

18. Te Uru Kahika proposes that increased funding is needed for long-term applied environmental research, and that mechanisms for environmental and human health research should be better linked. A rebalancing to provide more funding for applied environmental research, including long-term monitoring programmes, is strongly recommended; as is assessing research proposals foremost on their potential to create outcome benefits for the nation.
19. Funding is needed for knowledge transfer as well as knowledge creation. Envirolink (a regional council driven funding scheme administered by MBIE) has been a very useful mechanism for transferring environmental research knowledge to the regional sector. It is proposed that similar funding mechanisms could be created for natural hazards science and mātauranga Māori. Furthermore, increasing the funding to support science knowledge transfer to the public more broadly - and across New Zealand - would also be helpful.
20. Finally, funding will deliver greater value for the nation if the RSI system becomes more efficient, open and accountable. Under the current RSI system, competitive bidding between CRIs and other organisations consumes a great deal of resources, and there is a relatively low success rate for research proposals. In some cases, research outputs are not open access. It is the view of Te Uru Kahika that publicly-funded science and research should be freely and publicly available.

Institutions

21. The green paper proposes re-examining how we design and shape public research institutions (focussing on CRIs and Callaghan Innovation) to enable them to give effect to national priorities, encourage greater connectivity, and be adaptable in a fast changing world. Key questions and areas for discussion encompassed institutional design, including designing Tiriti enabled institutions and exploring the roles that institutions should play areas such as workforce development, coordinating large capital investments and enabling better knowledge exchange.
22. Te Uru Kahika recognises the valuable contributions made by New Zealand's research institutions and consider that many are already performing well. However, regional authorities often find that it is difficult to influence and access the science from some institutions at some times. This situation typically arises when institutional incentives drive scientists to publish, but not necessarily transfer their knowledge to the likes of regional authorities or other potential end-users.
23. Where there is a need to improve the performance of research institutes, we encourage consideration of a range of approaches, such as those laid out in this submission. Improvements could be delivered through the adoption of shared overhead functions such as cost-shared laboratories, equipment, libraries, human resource systems, data/IT systems, governance entities and so forth. Co-location can also bring benefits such as collaboration. Our submission identifies a range of potential levers for improvement. However, we also stress the need to explore a range of possible options and feedback loops prior to implementing significant changes, to ensure they are able to achieve the outcomes sought.

Research workforce

24. The green paper explores how we best develop our workforce, ensure the RSI workforce is connected, diverse and dynamic and they are offered attractive and flexible careers

and career pathways. Specific questions were framed around how we enable attractive and flexible careers and career pathways for the research workforce, including designing funding mechanisms that explicitly support workforce development, and how we include workforce considerations into the design of research priorities.

25. Te Uru Kahika acknowledges that there are crucial shortcomings in the science graduate cohorts that are coming through New Zealand's education system. There is also a critical lack of industry training and professional development opportunities for New Zealand's science workforce. Within the science disciplines, New Zealand's tertiary education system isn't producing enough graduates in certain areas, such as hydrology, hydrogeology, soil science, biosecurity and geomorphology, to name a few. Furthermore, graduates often lack the necessary practical skills required in today's workplaces, such as experience in real-world work environments, understanding of legislation, policymaking and planning, the machinery of government, project budgeting and management or stakeholder relationship management.
26. We recommend that New Zealand's RSI system should expand its mechanisms and support for the training and professional development of scientists. This includes providing professional development opportunities, including internships and secondments, to broaden the relatively narrow expertise gained in a university degree. Regional authorities are well placed to support such initiatives.
27. Upskilling in te ao Māori is urgently needed, not just in terms of increasing the engagement of Māori with and within the RSI system as described above, but also to increase the cultural competency of scientists who do not presently have this background.

Infrastructure

28. The final consideration proposes exploring effective funding, governance and ownership arrangements for national research infrastructures and how MBIE should support sustainable, efficient and enabling investment in research infrastructure.
29. Our submission proposes that investment in RSI infrastructure should be planned and sustainable, and access to it should be coordinated and collaborative. State-of-the-environment monitoring and reporting are crucial activities that need to be better supported in the RSI system.
30. We strongly recommend that the RSI system should support a comprehensive national environmental reporting system, with aligned funding to support the data requirements, standards, process understanding, and time scales associated with this reporting. This includes central coordination and funding of a number of substantive datasets that are currently held regionally (e.g., by regional authorities and research institutions) but have national significance. Here we include examples such as national soil mapping (SMAP), the Land Cover Database (LCDB), national LiDAR and climate datasets, all of which should be fully funded and not have to compete in the Endeavour Fund for project funding.

Financial considerations—LTP/Annual Plan

31. This memorandum and the associated recommendations are consistent with the Council's adopted Long-Term Plan and estimates. Any financial information included in this memorandum has been prepared in accordance with generally accepted accounting practice.

Policy considerations

32. This memorandum and the associated recommendations are consistent with the policy documents and positions adopted by this Council under various legislative frameworks including, but not restricted to, the *Local Government Act 2002*, the *Resource Management Act 1991* and the *Local Government Official Information and Meetings Act 1987*.

Iwi considerations

33. This memorandum and the associated recommendations are consistent with the Council's policy for the development of Māori capacity to contribute to decision-making processes (schedule 10 of the *Local Government Act 2002*) as outlined in the adopted long-term plan and/or annual plan. Similarly, iwi involvement in adopted work programmes has been recognised in the preparation of this memorandum.

Community considerations

34. This memorandum and the associated recommendations have considered the views of the community, interested and affected parties and those views have been recognised in the preparation of this memorandum.

Legal considerations

35. This memorandum and the associated recommendations comply with the appropriate statutory requirements imposed upon the Council.

Appendices/Attachments

Document 3041573: Te Ara Paerangi - Future Pathways Green Paper

Document 3037377: Te Uru Kahika Submission on Te Ara Paerangi Future Pathways Green Paper



MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

RESEARCH, SCIENCE AND INNOVATION

TE ARA PAERANGI FUTURE PATHWAYS GREEN PAPER 2021

Te Kāwanatanga o Aotearoa
New Zealand Government



Ministry of Business, Innovation and Employment (MBIE)
Hīkina Whakatutuki – Lifting to make successful

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HE KUPU WHAKATAKI MINISTER'S FOREWORD

The research, science and innovation (RSI) sector has served New Zealand exceptionally well over the past 30 years. It is now timely to consider how we can best position our research system for the future.

The research, science and innovation sector has served New Zealand exceptionally well over the past 30 years. Crown research institutes (CRIs), universities and other TEOs, independent research organisations, and other parts of the RSI system have contributed to New Zealand on multiple fronts. Their contribution has spanned breakthrough research, supporting critical sectors of the economy and society, enhancing understanding of the natural world, solving environmental challenges, and responding to multiple emergencies. New Zealanders have all benefited environmentally, economically and socially from the work the research community has undertaken on their behalf.

It is now timely to consider how we best position New Zealand's research system for the future. A modern, future focused research system for New Zealand must strengthen the role of Māori in the system and consider how the system achieves outcomes for Māori. We need to embed Te Tiriti o Waitangi (Te Tiriti) across our RSI system, better enabling mātauranga Māori and the interface between mātauranga and other forms of research.

Such a research system will support and build on the excellent and impactful research already underway on addressing New Zealand's significant environmental challenges, such as climate change. We saw the best of our research system through the support it provided to the country during the COVID-19 pandemic. We need to consider building on those aspects of the system that served the country so well, ensuring it is well positioned to provide such support again when the need arises.

We also need to consider how our research system can leverage future economic opportunities in a rapidly changing world to support our recovery from COVID-19, and shape a future economy that is more productive, resilient and diverse. This includes supporting the transformation of traditional sectors in our economy (such as diversifying and adding value in food and fibre) and supporting the growth of knowledge-intensive industries. It also includes supporting the creation of the knowledge-intensive and scalable firms that the Productivity Commission's report on 'frontier firms' notes are vital to uplifting New Zealand's national productivity and wellbeing. Our research system needs to build novel and transformative options for the new economy of the future, as it continues to support current jobs and industries.

Addressing the opportunities and challenges of the future will mean considering the social aspects of goals like a just transition. Our social research will have a key role to play, and we need to consider its increasing importance in decision-making and policy formation in a range of domains. Improving social wellbeing and ensuring the economy works for everybody are fundamental to a successful future for New Zealand; research into the long-term drivers of wellbeing are vital.

Meeting the challenges and opportunities of the future will require harnessing the collective capability of our RSI system across all fields and disciplines including social research. Collaborative, multifaceted and interdisciplinary approaches will be essential to tackling the complex and interdependent challenges that are central to New Zealand's future.

This green paper presents ideas and opportunities that build on the direction of previous policy development to form a research system that is connected, adaptable and resilient.

In 2010, the Government reasserted the importance of the public good mission of our CRIs through the CRI Taskforce. CRIs are, by design, focused on the traditional sectors of the economy, such as food and fibre, and aspects of the environment and natural hazards, and have performed exceptionally well for those sectors. Public good research, however, extends beyond these sectors and organisations. We need to consider how to enhance and extend the role of all research organisations into broader challenges and opportunities for the country, as well as speaking directly to the needs of a more productive future economy.

In 2014, in response to this context, we made the most recent attempt to introduce a set of cross-system, national research priorities through the National Science Challenges (NSCs). The NSCs have worked well in terms of improving collaboration across the system, and have produced much excellent research. However, the NSCs were also layered across an existing framework of organisations and funding, which has placed constraints on their success. Opportunities are now available to do more and better with national research Priorities and mission-driven innovation.

The Government funding that supports research activities in New Zealand has increased significantly since 2010, by around 75 per cent. With it, the system has grown and done much more. However, the way in which funding is distributed has led to precarity in organisational revenue for CRIs, despite the overall funding increases, and we continue to observe elements of unproductive competition across all organisations in the research system. Overall, we see a system where demand for its support far outstrips the supply of resources. This makes our goal of raising national research and development expenditure to 2 per cent of gross domestic product a bare minimum.

Despite the recommendations of the 2010 CRI Taskforce, research institutions in New Zealand have largely remained within the same operational form and design as established in the early 1990s. It is timely to check in on the design and organisation of our institutions to make sure we continue to have sound design principles, and are connected, resilient, adaptable and able to meet the future needs of New Zealand.

There remain huge opportunities to grow the ways in which our system serves and includes Māori, and therefore all of New Zealand, including by placing Te Tiriti at the forefront of its design. The people who work within the RSI system – who are its single most important aspect – need to experience a system that values equity, diversity and inclusion, and that provides rich, varied, exciting and stable careers.

We need to gain a better understanding of the areas requiring change, to ensure the research system responds to and meets the nation's future needs. The future state for the system needs to be one that is adaptable for the future, resilient to changes, and connected; to itself, to industry, to public sector users of research, and internationally. This green paper starts the conversation on how we build that system together.



Hon Dr Megan Woods
Minister of Research, Science and Innovation



Hon Dr Ayesha Verrall
Associate Minister of Research, Science and Innovation



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TĀ MĀTOU E WHAI ANA KI TE WHAKATUTUKI WHAT WE ARE SEEKING TO ACHIEVE

Through this green paper, we are seeking to start an open, wide ranging and deliberative conversation about the future of New Zealand's research system.

Through this green paper, we are seeking to start a wide-ranging and deliberative conversation about the future of New Zealand's research system. We are seeking to achieve two things. Firstly, to gather a broad base of views on the current system, to better understand the problems it faces and opportunities for improving it. In some areas canvassed in this document, we are unsure of the best solutions to the opportunities and problems identified. Second, we are seeking to test the ideas we have developed in response.

We would like your views on whether these ideas will work, to what extent, and if other, better, ideas exist that we have not canvassed.

TE HŌKAITANGA SCOPE

The focus for this green paper is the design of the 'public' research system. A technical description is that we are considering changes to aspects of funding administered as part of the RSI ministerial portfolio, and changes to institutions within that portfolio, principally the Crown research institutes (CRIs) and Callaghan Innovation. The research that takes place in other public institutions, such as universities, Te Pūkenga and wānanga, is also within scope of this green paper, as is the publicly funded research that takes place in independent research organisations and other independent entities.

We take a broad definition of research for the purposes of this paper (see the glossary for more info). The term 'research' when used as a single word should be read to encompass all activities usually understood as such, including but not limited to research into the arts and humanities, social research, and natural sciences.

We are not actively considering changes to Vote: Tertiary Education funds, such as the Performance-Based Research Fund (PBRF) as part of this work programme, nor are we actively considering structural or design changes to TEOs. But we recognise the importance of connections across the wider RSI sector, and that some organisations receive funding through both RSI and Tertiary Education mechanisms, so we are interested in feedback on the relationships between Tertiary Education funding streams and structures, and the proposals suggested in this document. In general, at this stage, we would like to gather a broad range of feedback on all aspects of this system to get a wider understanding of intersects between the education and RSI systems.

We are not planning changes to business-facing RSI programmes as part of this work (such as the R&D Tax Incentive) so they can be considered as out of scope. However, we are interested in improving connectivity between businesses and other users of knowledge generated by our public research institutions, and the channels of knowledge exchange and transfer between research institutions, businesses and others to achieve greater impact. Along with aspects of system and institutional design that improve channels of knowledge exchange and transfer between businesses and research institutions, we remain interested in hearing feedback on business-facing RSI schemes, especially if they relate to parts of the system that are in scope.

A guiding principle for this reform is that we have no pre-commitment to specific solutions, unless otherwise noted. In general, we are keen on the most open exploration of the problems and opportunities we present. In qualifying this, we note the following:

- › We consider that the problems we raise are real issues that need to be addressed in any future research system. This means we have to act in some way. This is the case for all the problems we raise, unless this green paper specifically asks for comment on whether you think we have identified the right problem. While we are interested in deep discussion about these problems, we will likely make changes to address them, unless presented with compelling reasons why we should not.
- › Our proposals in this paper are intended to provide model solutions, to stimulate discussion on system design and test the robustness of those solutions. None are set in stone, and we are very open to discussion on alternatives.
- › For some specific areas covered in this document, work is already under way, and may have been for some time. We are interested in feedback on these areas, but ask you to note that we have already taken steps in a particular direction. These are:
 - › Accelerating the impact of Vision Mātauranga, via funding through Budget 2020
 - › seeking to encourage combined property planning and co-location between CRIs and universities
 - › ensuring a robust basis for future investments in our e-research infrastructure (currently through Research Education Advanced Network New Zealand and New Zealand eScience Infrastructure)

TĀ MĀTOU TUKANGA OUR PROCESS

This consultation will be open for from 28 October 2021 to 16 March 2022. After that time, MBIE will compile the feedback received and provide advice to Ministers on next steps. We expect Ministers will then take key decisions at Cabinet in early 2022. Because the proposals in this green paper have the potential to result in significant reforms, we expect any decisions leading to major change will be subject to further consultation, discussion and, potentially, co-design or other ways of further engaging with researchers and members of the public. Ministers will make decisions on those further engagement processes following the first phase of consultation that this green paper sets out.

We will adopt the following engagement principles for this programme of work:

- › Our processes will be as transparent as possible, while respecting Parliament's and Ministers' roles and requirements as decision-makers.
- › We will provide meaningful opportunities for Māori, as Tiriti partners, to help shape our engagement plan and process, and to inform us of their interests and views in the substantive issues in this work stream (we discuss this further in Section 2).
- › We will signal key decision points and processes in advance, with sufficient time for stakeholders and Māori to prepare for and provide input.
- › We continue to create opportunities for broad stakeholder and Māori participation – including beyond this consultation.
- › All input is valuable and will be considered, be it at a detailed or more strategic level.
- › The outcomes of this process will be informed by your input; there is no pre-commitment to specific solutions unless otherwise noted (see 'scope' above for more on this), and feedback preferring the status quo is a valid response

KA AHATIA TŌ URUPARE WHAT WILL HAPPEN TO YOUR FEEDBACK

All feedback will be read by MBIE officials and considered carefully. A summary of feedback will be provided to Ministers and Cabinet. All feedback is valuable and will be considered. This does not mean that decisions will necessarily follow the majority of feedback; decisions will also be informed by other evidence, analysis and judgement. It is important to this process that we have access to a broad range of your ideas, preferences and experiences. They will all be considered.

We plan to publish all feedback received on the MBIE website. This will include your name and any other identifying details, if they are provided as part of your submission. If you do not want some or all of the information you provide as part of this consultation to be made public, please let us know when you give your feedback. This does not guarantee we will not release this information, because we may be required to under the Official Information Act 1982. It does mean that we will contact you if we are considering releasing information that you have asked that we keep in confidence. We will take your reasons for seeking confidentiality into account when making a decision on whether to release the information. We will not contact you before publishing your feedback if you have not requested confidentiality.

We are particularly interested in stimulating ongoing discussion during the consultation period, and sharing any positive, exciting or visionary new thinking we receive. We will therefore consider publishing feedback we receive as we receive it, that is, during the consultation period.

HOW TO PROVIDE FEEDBACK

We want to hear from anyone in the broader research, science and innovation system. Whether you're a researcher, scientist, leader, manager or user of the system, we want your feedback. You can provide your feedback in a number of ways:

Email us directly at: FuturePathways@mbie.govt.nz

Completing the online submission form available at www.mbie.govt.nz/futurepathways

By mailing your submission to:

Future Pathways Policy Team
Ministry of Business, Innovation & Employment
PO Box 1473
Wellington 6140

TE HANGANGA O TĒNEI PEPA KĀKĀRIKI STRUCTURE OF THIS GREEN PAPER

This green paper is divided into six chapters, which we suggest are the main areas where we could take action. These are:

- › Research Priorities
- › Institutions
- › Funding
- › Te Tiriti, Mātauranga Māori, and Māori Aspirations
- › The Research Workforce
- › National Research Infrastructure

Each chapter outlines proposed opportunities for change and asks for feedback on possible solutions.

Chapter one: discusses the role that clearly expressed, whole-of-system research Priorities can play in helping to focus activities of the research system and concentrate resources meaningfully towards these Priorities.



Important questions and areas of discussion for feedback are how we design those priorities, how we run a process for deciding what they are, and how we set up how Priorities are governed and operationalised. We are also interested in your feedback on how the establishment of Priorities may affect the RSI workforce.

Chapter two: discusses how the research system can seek to understand and honour Te Tiriti obligations and opportunities, and explores pathways to a modern research system for Aotearoa that is Tiriti led and reimagine how to give life to Māori research aspirations, and better enable mātauranga Māori in our research system and the interface between mātauranga Māori and other activities in the system.

Key questions and areas of discussion that we are seeking your feedback on in this chapter are around Māori preferences for engagement, thoughts on how mātauranga Māori can be better enabled and protected, and regionally based Māori knowledge hubs.

Throughout the rest of the paper, we have also sought to highlight areas where we think there is potential to give effect to Te Tiriti, elevate Māori aspirations in the system, and create a system more responsive to Māori priorities.

Chapter three: discusses possible ways to reshape the funding system for the future. This includes how funding can be used to give effect to whole-of-system Priorities and reduce unproductive competition, along with ensuring institutions can adapt to changing priorities and respond to emerging opportunities. We investigate how we can properly fund important activities, such as critical research functions, high priority services, emergency response, and databases and collections.

Important questions and areas of discussion for feedback are on how we decide what the core functions of the RSI system are and how to fund them, and whether introducing a base grant funding model might improve stability and resilience for organisations in the research system.

Chapter four: focuses on the design and shape of research institutions to enable them to give effect to whole-of-system Priorities and be adaptable in a fast-changing world.

Key questions and areas of discussion that we are seeking your feedback on are regarding institutional design, including designing Tiriti enabled institutions and exploring the roles that institutions should play areas such as workforce development, coordinating large capital investments and enabling better knowledge exchange.

Chapter five: discusses how the system can better support the development and retention of the research workforce.

Important questions and areas of discussion for feedback are on how we enable attractive and flexible careers and career pathways for the research workforce, including designing funding mechanisms that explicitly support workforce development, and how we include workforce considerations into the design of research Priorities.

Chapter six: discusses research infrastructure, including future funding, governance and ownership arrangements for national research infrastructure, and how we can maximise our investment in research infrastructure.

Important questions and areas of discussion for feedback are on how we should support sustainable, efficient and enabling investment in research infrastructure.

Table 1: Summary of questions

Question	Section	Question
1. Research Priorities		
1	1.2.2	Ngā kōwhiringa hoahoa Whakaarotau Matua Priorities design What principles could be used to determine the scope and focus of national research Priorities?
2	1.3.2	Ngā kōwhiringa hoahoa mō te tukanga tautuhi whakaarotau Priority-setting process What principles should guide a national research Priority-setting process? How can the process best give effect to Te Tiriti?
3	1.4.2	Ngā kōwhiringa hoahoa whakahaere matua Operationalising Priorities How should the strategy for each national research Priority be set and how do we operationalise them?
2. Te Tiriti, mātauranga Māori and Māori aspirations		
4	2.2	Te huarahi e marohitia ana Engagement How would you like to be engaged?
5	2.3	Te whakamana me te whakahaumarū i te mātauranga Māori Mātauranga Māori What are your thoughts on how to enable and protect mātauranga Māori in the research system?
6	2.4	Te whakapakari hononga ki te mātauranga Māori ā-rohe Regionally based Māori knowledge hubs What are your thoughts on regionally based Māori knowledge hubs?
3. Funding		
7	3.2.1	Ngā kōwhiringa matua mō ngā taumahi matua Core functions How should we decide what constitutes a core function and how do we fund them?
8	3.3.2	Ngā kōwhiringa hoahoa mō tētahi tauira tuku pūtea hou Establishing a base grant and base grant design Do you think a base grant funding model will improve stability and resilience for research organisations, and how should we go about designing and implementing such a funding model?

Question	Section	Question
4. Institutions		
9	4.4.1	Te āhua, whakaruruhau me te hanganga o te whakahaere Institution design How do we design collaborative, adaptive and agile research institutions that will serve current and future needs?
10	4.4.2	Te whakawhanaketanga me te tautiaki pai ake o te hunga mahi me te raukaha Role of institutions in workforce development How can institutions be designed to better support capability skills and workforce development?
11	4.4.3	Te ruruku pakari ake me te arotautanga o ngā haupū rawa me ngā rawa nunui Better coordinated property and capital investment How should we make decisions on large property and capital investments under a more coordinated approach?
12	4.5	Te tautoko i ngā wawata o te Māori Institution design and Te Tiriti How do we design Tiriti-enabled institutions?



Question	Section	Question
13	4.6	Ngā pāpātanga pai ake – te whakawhiti mōhiohio me ngā pāpātanga rangahau Knowledge exchange How do we better support knowledge exchange and impact generation? What should be the role of research institutions in transferring knowledge into operational environments and technologies?
5. Research workforce		
14	5.2	Ngā whakaarotau me te hunga mahi rangahau Workforce and research Priorities How should we include workforce considerations in the design of national research Priorities?
15	5.3.1	Ngā pūtea me te hunga mahi rangahau Base grant and workforce What impact would a base grant have on the research workforce?
16	5.3.2	Ngā tikanga tuku pūtea hou Better designed funding mechanisms How do we design new funding mechanisms that strongly focus on workforce outcomes?
6. Research infrastructure		
17	6.2.2	Ngā kōwhiringa hoahoa matua mō te tuku pūtea ki te hanganga rangahau Funding research infrastructure How do we support sustainable, efficient and enabling investment in research infrastructure?

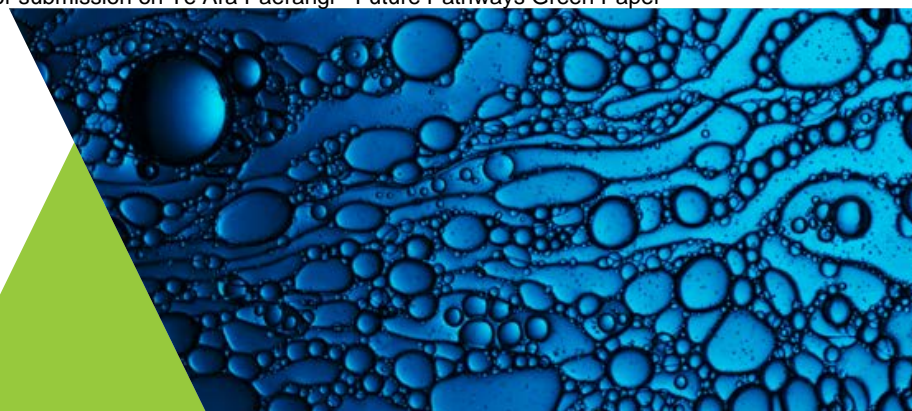
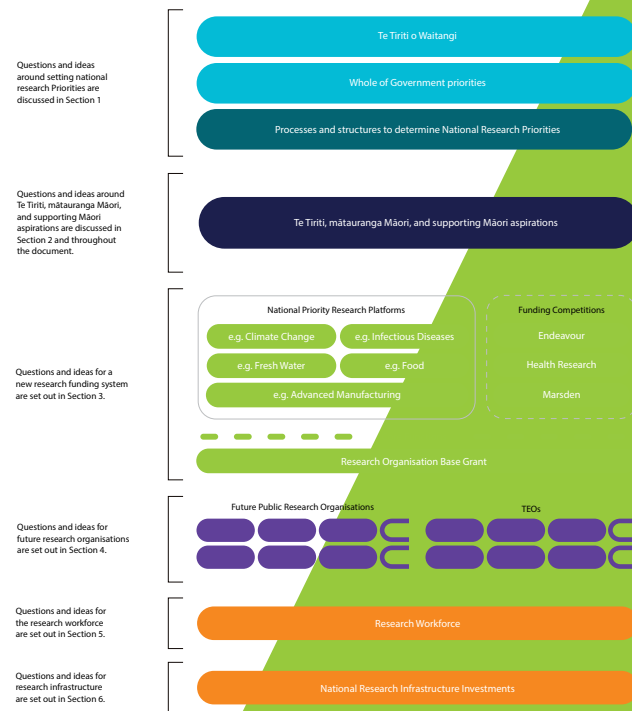


Figure 1 outlines a possible model for a future research system for New Zealand. Proposals in this green paper are often linked in a way that needs to be considered a 'package', that is, they are mutually reinforcing, and some changes may not be effective unless they are made alongside others. Figure 1 is intended to be a high-level guide to the full scope of changes proposed in this document.

Figure 1: Possible model of future RSI system for New Zealand

THE IDEAS FOR THE SYSTEM WE REFER TO IN THIS GREEN PAPER

This green paper uses a set of ideas for a future research system as a basis for discussion. The diagram to the right sets out a high-level picture of those discussion areas, and how they fit together.



TE WHAKAMĀRAMATANGA INTRODUCTION

Meeting the challenges and opportunities of the future will require harnessing the collective capability of New Zealand's research, science and innovation system.

Research, science and innovation will drive New Zealand's future prosperity and well-being. Combined, the public research organisations, including universities, CRIs, Callaghan Innovation, wānanga, te pūkenga, Ministries and other government organisations, represent nearly half of New Zealand's overall RSI investment. These organisations dominate the public good research areas, including environmental monitoring, climate change, public health in terms of food safety, infectious diseases, productivity, biodiversity and biosecurity, water supply and natural hazards.

It is vital the arrangements supporting public research organisations allow researchers to deliver excellent and impactful research, support critical functions, infrastructure and collections, address significant risks to life and well-being, and embody Te Tiriti in action.

TE KAUPAPA MŌ TE PANONI CASE FOR CHANGE

Recent reports make a compelling case for change and present various recommendations for a future state.

1. Ministry of Business, Innovation and Employment. (2020). *Te Pae Kahurangi: Positioning Crown Research Institutes to collectively and respectively meet New Zealand's current and future needs.* www.mbie.govt.nz/assets/te-pae-kahurangi-report.pdf
2. New Zealand Productivity Commission. (2021). *New Zealand Firms: Reaching for the frontier.* www.productivity.govt.nz/assets/Documents/Final-report-Frontier-firms.pdf
3. Parliamentary Commissioner for the Environment. (2020). *A review of the funding and prioritisation of environmental research in New Zealand.* www.pce.parliament.nz/publications/environmental-research-funding-review
4. Office of the Prime Minister's Chief Science Advisor. (2021). *The future of commercial fishing in Aotearoa New Zealand.* www.pmcscs.ac.nz/what-we-do/publications
5. Ngā Pae o te Māramatanga. (2021). *Te Pūtahitanga: A Tiriti-led Science-Policy Approach for Aotearoa New Zealand.* www.maramatanga.co.nz/publication/te-p-tahitanga-tiriti-led-science-policy-approach-aotearoa-new-zealand
6. The Cabinet Paper, May 2021, which established this reform programme. www.mbie/futurepathways

In addition, throughout 2018 and 2019, we consulted extensively on a new RSI strategy, the development of which was interrupted by the COVID-19 pandemic. Consultation revealed strong views that the current research system suffers from weak connectivity. Researchers found it challenging to connect with researchers from different organisations; research organisations found it hard to connect with each other; businesses found it challenging to engage productively with the public research sector; and data showed that the RSI system continues to struggle to connect effectively internationally. This is similar to feedback received during engagement on the Health Research Strategy in 2017.

Additionally, responsiveness to Māori was noted to be weak and models of engagement poor. Stakeholders noted much work needed to be done to improve the way the system interacts with Māori at multiple levels.

The 2020 *Te Pae Kahurangi* review echoed many themes from the RSI strategy consultation. It found a lack of role clarity exists for institutions, unproductive competition occurs between institutions and integration is lacking between universities, CRIs and other parts of the research system. It repeated findings from the RSI strategy about the system's weak responsiveness to Māori.

Te Pae Kahurangi also noted difficulties the research system has in adapting to changing national needs and building capabilities necessary for future resilience and transformation. It found a proliferation of governance and a large number of competing strategies and priorities, which struggle to be given effect.

In sum, these reports and previous consultations reveal significant issues with the current system for funding research, in particular:

- There is a significant amount of fragmentation that results in a lack of role clarity for institutions, unproductive competition between institutions, and lack of integration between our universities, CRIs, and other parts of the research system.
- There is a large proliferation of governance and competing strategies and priorities, which struggle to be given effect and connect directly to funding.
- System responsiveness to Māori is weak and models of engagement poor.
- There is weak connectivity between researchers, organisations, businesses, the public sector, and internationally.
- Difficulty adapting to changing national need and building capabilities necessary for future resilience and transformation.

The problems noted in these recent reports are similar to those which have been canvassed repeatedly over the last ten years. Successive governments have made various changes to the research system to improve connectivity and responsiveness, reduce fragmentation and establish a clear line of sight where it contributes clearly and effectively to national goals and challenges.

While these reforms have often been successful within their scope, collectively they have not led to the system-level transformation needed.

NGĀ ĀHUAHIRA O TĒTAHI PŪNAHA RANGAHAU HOU FEATURES OF A MODERN RESEARCH SYSTEM

We want to create a modern, future-focused research system for New Zealand. It needs to be adaptable for a rapidly changing future, resilient to changes, and connected: to itself, to industry, to public sector users of research, and internationally. We have used these core principles, of a system that is connected, adaptable and resilient, to guide development of the proposals in this green paper.

Such a system will need to reflect New Zealand's unique opportunities and challenges. It will need to embed Te Tiriti across the design and delivery attributes of the system, and enable opportunities for mātauranga Māori. It will also need to recognise that research is a global undertaking and seek to stand alongside the best systems in the world.



When we consider modern research systems in other small advanced economies, the following features are apparent:

1. **A high degree of connectivity**, with collaborative projects the norm, and researchers who are able to move easily between institutions, and into and out of industry and public services. A high priority is given to participation in global research communities, even when addressing mainly local problems or opportunities.
2. **A significantly greater level of investment than New Zealand's current level**, proportional to gross domestic product (GDP). We have already set a goal of raising research and development (R&D) expenditure to 2 per cent of GDP by 2027, and put measures in place to encourage the private sector to make up a greater proportion of that expenditure.
3. **A serious approach to talent development**, resourcing, attraction and retention, with a strongly international mindset. Many systems support early to mid-career researchers with pathways to establish programmes and teams, and have dedicated schemes for attracting and retaining outstanding international researchers to establish research groups and programmes.
4. **A recognition of the impact on human capital development adjacent to research**. Researchers working at the cutting edge in advanced research techniques with students in their labs enable those students to step into government, industry and civil society with deep understanding of the technology, and related skills. These skills assist with a country's broad ability to apply technology to improving a wide range of services and industries.
5. **A strong leadership role for the research system** in identifying and creating desirable future states for the economy, society and environment, and leading areas of global intellectual and technology development.
6. **Related, a system responsive to national research priorities**, usually focused on generating unique value for the economy from advanced technology, or addressing large-scale long-term problems, such as the challenges presented by climate change, or intergenerational disadvantage.
7. **Treatment of the research system as a distinct 'system'**, as opposed to a set of operational functions that feed into disparate industry sectors, government departments, or exist as adjunct functions of other public services.
8. **Planned, ongoing investment in research infrastructure**. Modern, flexible working environments that provide access to cutting-edge equipment and technologies that allow researchers to engage at the global frontier of knowledge production.

The generic development of research and innovation systems was summarised by the European Union in its 2020 report *Science, Research and Innovation Performance of the EU¹*, and is reproduced in figure 2. We would like to accelerate the development of New Zealand's research system to support it to stand alongside the best in the world; a system that creates transformative change and supports grand challenges.

¹ European Commission. (2020). *Science, Research and Innovation Performance of the EU 2020: A fair, green and digital Europe*. https://ec.europa.eu/info/publications/science-research-and-innovation-performance-eu-2020_en

Figure 2: Three frames in innovation policy

Framing	Key features	Policy rationale	Policy approaches (examples)
Science and technology for growth (since 1950s)	Linear innovation model, driven by R&D (research and development)	Addressing market failures (firms invest insufficiently in R&D because of public good character of innovation)	State financing of R&D; subsidies or tax incentives for business R&D
National and sectoral systems of innovation for improved competitiveness (since 1980s)	Focus on knowledge flows between upstream actors (universities, firms, agencies)	Responding to system failures, e.g. improving linkages between actors, addressing institutional problems (in laws, property rights, regulations)	Promoting science hubs and science-industry collaboration; education and training; cluster policies
Transformative change to address grand challenges (since 2010s)	Nurture radical innovation and new pathways; shape directionality of innovation	Promote system transformation, which incumbent actors are slow or reluctant to do	Missions and goals (SDGs, climate targets), assisting new entrants, creating transformative coalitions, learning, experimentation

Source: European Commission. (2020). *Science, Research and Innovation Performance of the EU 2020*, page 575.

We expect that building these features into our world class system will be shaped by specific activities for which New Zealand has a particular interest and talent. For instance, threading mātauranga Māori throughout as an integral part of transformation will be key to building our new system and expanding the potential for transformation.



1

NGĀ WHAKAAROTAU RANGAHAU RESEARCH PRIORITIES

1. NGĀ WHAKAAROTAU RANGAHAU RESEARCH PRIORITIES

This chapter discusses the role that clearly expressed, whole-of-system research Priorities can play in helping focus activities of the research system and to concentrate resources meaningfully towards national challenges and opportunities.

1.1 HE AHA TE RARURARU, ARAWĀTEA RĀNEI E HIAHIA ANA MĀTOU KI TE WHAKATUTUKI? WHAT PROBLEM OR OPPORTUNITY ARE WE TRYING TO ADDRESS?

Researchers naturally seek to address the most important and pressing opportunities and problems that are facing people and the planet. Research systems often aim to codify those opportunities and problems, and place supporting structures around them through research priorities or mission-driven funds.

We made the most recent attempt to introduce cross-system, national research priorities in New Zealand through the National Science Challenges (NSCs). The NSCs have worked extremely well in improving collaboration across the system and have produced much excellent and impactful research. However, the NSCs were layered across an existing framework of organisations and funding, which have placed constraints on their success. Opportunities exist to do more and better with national research priorities and mission driven innovation. The Productivity Commission's report on frontier firms² emphasises the importance of focused innovation policies at scale that build ecosystems of deep capabilities in which those frontier firms can flourish.

We do not currently have a single, consistent set of national research priorities for New Zealand. How and when Te Tiriti is engaged across our system when setting priorities for research is also variable. Instead, our system is characterised by many different priorities. Priorities can be integral (e.g. as embodied in the NSCs), implicit in annual budget or other government policy decisions (eg, new Strategic Science Investment Fund platforms), or originate from government departments in the form of various science roadmaps, strategy documents and priority lists. In addition, organisational strategies (and therefore priorities) are set individually by TEOs and CRIs, creating a further series of priorities. Added to this are priorities set by various private sector bodies.

Despite researchers' natural tendencies to align behind grand challenges, the overall picture of our system is one of unnecessary fragmentation and priority clutter. Our research system struggles to direct resources clearly towards areas of the highest importance, while the Government, as funder and steward of the research system, struggles to give effect to its priorities through the same system. For example, the system currently lacks a locus of effort for climate change research. Equally, few of our current research priority mechanisms

speak directly to Māori needs or aspirations. In many areas, government struggles to identify how much is actually invested, whether it is invested in the right way, and how this investment might be most effectively improved.

The 2021 Te Pūtahitanga report noted it is particularly problematic that little data exists on the scale of investment in research conducted by Māori, or for the benefit of Māori³.

This means the RSI system struggles with:

- ▶ **ineffective resource allocation:** it is difficult to align resources, such as expertise, investment and infrastructure, to tackle specific problems, and the system is unable to clearly direct resources towards specific areas. It also results in a lack of coordination of research, which may be replicated in different places or not done in such a way that it can connect with other relevant research.
- ▶ **lack of transparency over purpose and accountability:** it is difficult to know who is responsible for specific issues and areas. This makes it hard for researchers and users of the system to connect and collaborate meaningfully. It also makes it hard to evaluate the results of government investments.
- ▶ **unnecessary complexity:** it is difficult for users to navigate the system and find a focal point for entry.
- ▶ **inability to easily shift priorities over time:** when no locus of activity exists for an important area of research, it is hard to make meaningful changes to that area, which may include increasing investment.

3 Ngā Pae o te Māramatanga, (2021), *Te Pūtahitanga: A Tiriti-led Science-Policy Approach for Aotearoa New Zealand*, www.maramatanga.co.nz/publication/te-p-tahitanga-tiriti-led-science-policy-approach-aotearoa-new-zealand



2 New Zealand Productivity Commission. (2021). *New Zealand Firms: Reaching for the frontier*. www.productivity.govt.nz/assets/Documents/Final-report-Frontier-firms.pdf

- **persistent uncertainty over the value of investments:** because it is challenging to locate and account for research intended to address specific problems or opportunities, it is hard to quantify and evaluate the amount of research being directed to different areas and to measure the impact of research investment.
- **underprioritisation of mātauranga Māori and Te Tiriti:** A number of reports consistently describe a mismatch between the intent and the operationalisation of Te Tiriti and the RSI policies and practices that seek to enable it. This often expresses itself as deprioritisation, underinvestment, and mismanagement of mātauranga Māori in our system. It is also appears to disempower Māori from flourishing within the system. We need to consider how our current structures and processes of prioritisation side-line Māori priorities.
- **unbalanced investment portfolios:** we risk concentrating efforts on incremental improvements that forgo the opportunity for more transformative long-term problem-solving, or, conversely, conducting a large amount of fundamental exploratory research at the expense of more immediate needs. A system with a strong sense of priorities will address both goals with appropriate funding and delivery mechanisms.

The research system needs a set of clearly expressed, whole-of-system research Priorities. Ideally, Priorities will act as focal points for investment and accountability and provide transparency for Government's investment intentions. The system will be more effective if it concentrates appropriate resources meaningfully on a focussed set of activities.

Clearly expressed research Priorities will also offer the opportunity for government to make new, proactive investments in research areas of emerging importance. These Priorities could serve as more explicit drivers of focused technology, innovation or environmental policies. They could act as focal points for balancing research portfolios, ensuring an appropriate mix of leading-edge transformative research and experimental development in operational environments. Priorities could also provide the opportunity to monitor and evaluate translation of research activity into outcomes related to government priorities or strategies.

1.2 TE HOAHOA WHAKAAROTAU RANGAHAU DESIGNING RESEARCH PRIORITIES

1.2.1 He aha te tikanga o te whakaarotau? What do we mean by a Priority?

We are seeking feedback on suggested design features for national research Priorities. To start the discussion, the main features are presented here that might be seen in future research Priorities.

1. Priorities will be the vehicle for government to invest proactively in research areas it considers important. For example, a Priority focus might be climate change, infectious diseases, biosecurity, or data-intensive social research.
2. We expect all research Priorities to be co-developed with Māori, and to give active effect to Te Tiriti, with a clear process in place to enable this; which may be different for different Priorities.
3. Research Priorities will have dedicated funding. With reference to the current system, they will be similar to Strategic Science Investment Fund platforms or NSCs. It is an important feature of a future system that some funding is tied directly to Priorities that are strategically determined, rather than funding being determined separately to a Priority-setting process.

4. A specific amount of funding will be allocated to each Priority for a relatively long time, at least five years and potentially longer, depending on the area.
5. Priorities will form a single 'home' for their research focus in the RSI system. This does not mean all research under that focus area must be funded under the Priority. Investigator-led projects might be funded through different mechanisms, but we would expect the Priority to form, at the least, a locus of coordination and information sharing.
6. Priorities will be an expression of the most important matters for New Zealand that can be enabled through the research system. They will not describe all research activity that will happen. They will describe a sub-set of research with a particular focus of activity and resources. There will remain funding and support for investigator-led research that takes place outside of these priorities.
7. Priorities will support the full range of research activity, including basic research, applied R&D and knowledge transfer activities. The mix of these activities may be different for different Priorities.
8. We expect most, if not all Priorities will be multi-institutional and multidisciplinary, including social research. Priorities should draw on expertise from across the research system, to reflect the complex and multidisciplinary nature of the research required.

We would like your feedback on these choices. Are there any reasons we should or should not choose to adopt this direction?

1.2.2 Ngā kōwhiringa hoahoa Whakaarotau Matua Key Priority design choices

KEY QUESTION 1: What principles could be used to determine the scope and focus of research Priorities?

Assuming that a scheme of national research Priorities is adopted as described above, several further choices will be needed. We will need to determine **the type of focus of research Priorities**. For example, research Priorities could focus on a problem (e.g., pollution), an opportunity (e.g., alternative proteins), a technology (e.g., CRISPR), a mission (e.g., space) or a field of research (e.g., soil science). The type of focus might also depend on the context.

We are interested in your feedback on whether any type of focus is preferred over another and whether we could have a successful mix of different types of focus.

The scope of different Priorities and the principles for determining scope also need to be considered. Research Priorities will likely be developed in different sizes, depending on their unique circumstances and scopes, and it is unlikely one ideal size will suit every Priority. The range of Priorities and investments must create a coherent whole. Principles and attributes should be established that help determine the size and scope of the national research Priorities and we are interested in your feedback on what these should be.



1.3 TE TAUTUHI WHAKAAROTAU RANGAHAU Ā-MOTU SETTING NATIONAL RESEARCH PRIORITIES

1.3.1 Me pēhea te tautuhi i ngā Whakaarotau rangahau ā-motu? How should we set national research Priorities?

We will need a process for determining national research Priorities. Such a process should be predictable, insofar as it is planned, and provide good notice to those involved. It should be transparent, so users have confidence in how decisions are made and decision-makers can be held accountable. The system needs to be flexible enough to modify, create or disband national research priorities in response to changing contexts.

We will need to consider the criteria used to guide the priority-setting process. These criteria should take into account both current and future needs across the environment, society and economy, and embed Te Tiriti in any decision-making process. Our system will need instruments and resources, to create future opportunities for New Zealand and serve immediate needs.

Other countries with mechanisms already in place for setting research priorities have different structures, process and outcomes. However, they tend to consist of a mix of three components:

- 1. information and analysis:** most priority-setting is supported by background information and technical analysis of a country's context, society, environment, economy and global relative position across these factors.
- 2. consultation:** sometimes consultation is limited to particular stakeholders or takes place through different forms of workshop or structured group decision-making. It can also be directed broadly to the general public.

- 3. expert or executive decision-making:** judgement is ultimately exercised in final decision-making. This can be through independent panels of experts or lay people, executive groups of government officials, or by politicians; or by a series of such bodies, sometimes with mixed membership of a variety of stakeholders, or a combination of these.

How we set research Priorities in New Zealand will also need to uphold Te Tiriti and the diversity of the community as a whole.

1.3.2 Ngā kōwhiringa hoahoa mō te tukanga tautuhi whakaarotau Priority-setting process design choices

KEY QUESTION 2:

- A) What principles should guide a national research Priority-setting process?
- B) How can this process best give effect to Te Tiriti?

Many choices are available in how we design and run **priority-setting processes**.

We need to determine the attributes and principles that will guide a national research Priority-setting process, along with how such a process will combine information, analysis, consultation and decision-making. Any process will need to be co-designed with Māori and should offer government sufficient flexibility to make choices in changing contexts.

We need to determine who should make which decisions in the process and why. Some systems have a strong preference for independent or expert decision-makers, but our system will need to give effect to Government's research Priorities. We need to determine whether we can and should design a process that can accommodate both.

The national research Priorities need to be developed and defined in partnership with Māori and give effect to Te Tiriti. We need to carefully consider what partnership and co-development look like at different stages of the development process and how the process can ensure that voices and views from across Te Ao Māori are recognised.

Finally, we need to determine how frequently the research priority-setting process should be run. To invest strategically for the long term, most research priorities will need to be stable for some time. However, there also needs to be the agility to introduce new priorities in a timely fashion. We will need to consider how a process might be able to deal with emerging, out-of-cycle priorities.

1.4 TE HOAHOA Ā-ROTO O NGĀ WHAKAAROTAU RANGAHAU Ā-MOTU INTERNAL DESIGN OF NATIONAL RESEARCH PRIORITIES

1.4.1 Me pēhea ngā Whakaarotau rangahau ā-motu e mahi ai? How should national research Priorities operate?

The means for determining the research Priorities and their funding will be one where decisions are made about what is important and how they are resourced. But research priorities will also need to make internal decisions on what research to conduct, and focus on undertaking a sub-set of research of particular importance.

We want a system where decisions on research projects are reflective of Māori needs and give effect to Te Tiriti. Decisions should also reflect the interests and involvement of key stakeholders, and include responsibility and accountability mechanisms that partner with those stakeholders in the operation of research Priorities.

Stakeholders in this context means those closely reliant on research conducted by the Priority in question. They could be government or public service entities, such as health system participants, or significant government users of research, such as local government, or central government agencies, such as the Ministry for the Environment. They should also include Māori partners, together with industry or non-governmental organisation partners, as appropriate. We also need to consider how we might govern Priorities in areas of new or emerging technology, where there may not be any obvious existing stakeholders.



The operation of research Priorities will need to consider the needs and aspirations of these stakeholders and ensure the research is forward-looking and using the best techniques and processes available. Any system will need to guard against the prioritisation of short-term operational functions of a particular stakeholder group over longer term or more transformational research, and vice versa. Priorities should act as focal points for balancing a portfolio of different types of research, ensuring as far as possible an overview is given of the results chain from research to impact.

Strong research leadership and fit-for-purpose accountability mechanisms will need to ensure projects within a priority are meeting the highest standards of research excellence and impact. Research excellence will remain an important guiding principle of the RSI system but will look different in different research contexts. Research Priorities will need to value different modes of excellence, depending on the field and type of research being undertaken.

If the Government does choose to adopt a system of national research Priorities, strategies will need to be specifically linked to identified funding, and vice versa. In the past, some government research strategies have not achieved the impact intended because of a lack of dedicated funding. In the future, the priority-driven parts of our system should be matched by dedicated funding, for clarity and transparency in resourcing decisions.



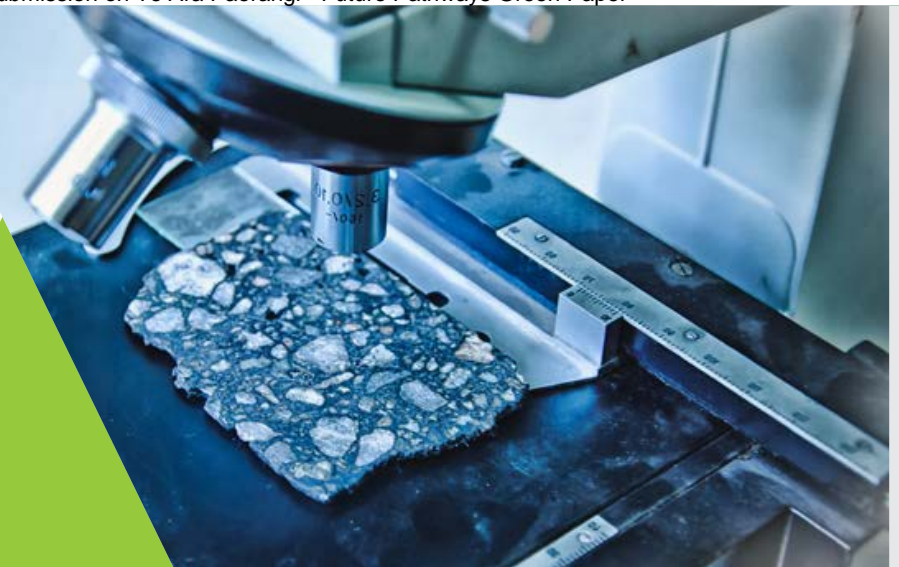
1.4.2 Ngā kōwhiringa hoahoa whakahaere matua **Priority operation design choices**

KEY QUESTION 3: How should the strategy for each research Priority be set and how do we operationalise and implement them?

The main factors to consider are those of strategy, governance and leadership. The strategy for a Priority will determine broad resourcing choices and objectives. Governance will provide a point of accountability and decision-making. Leadership will provide day-to-day direction and set the culture and working environment for a Priority. Leadership may also provide intellectual direction. The distribution of responsibility between these functions, and their relative independence, forms the main design choices. We will need to consider how to enable the operations of Priorities to give effect to Te Tiriti through partnership at the level of governance, management and operations.

We may not want to adopt a single model for all Priorities. Different models could be adopted, based on what works best for the Priority in question.

We need to determine how the strategy for each national research Priority should be set. This should consider whether strategy setting should be done separately from the Priority, for example, by government or those with relevant expertise, such as an expert panel. We also need to consider how stakeholders are included in the strategy-setting process and the information that should inform the strategy.



We need to determine how research Priorities are governed. This will include the modes and models of oversight and accountability that might be adopted and available. This includes how independently the national research Priorities should be governed, whether oversight roles can be split from operational ones, and whether multiple national research Priorities could share governance.

We note a proliferation of governance mechanisms in the current system at many levels, some with conflicting or cross-cutting responsibilities. At one end of the system are the existing governance mechanisms for research organisations and at the other is governance of individual research programmes. Many existing priority mechanisms have their own governance boards, which set direction and provide a point of accountability for leadership. In the future, we do not want governance functions that form barriers to connecting across the system. We also need avenues for input and oversight from Māori and stakeholder groups, as well as basic accountability relationships.

We need to determine the role and mandate that research leaders have in the research priorities and how they can be best supported. Discussions with research system stewards in other countries have highlighted that strong research leadership of work programmes (e.g. principal investigators or centre leaders) is the most critical success factor, more so than system design or strong governance. This should include consideration of the responsibilities or accountabilities and participation in other roles in areas such as strategy setting.





2

TE TIRITI, MĀTAURANGA MĀORI ME NGĀ WAWATA O TE MĀORI **TE TIRITI,** **MĀTAURANGA MĀORI** **AND MĀORI** **ASPIRATIONS**

2. TE TIRITI, MĀTAURANGA MĀORI ME NGĀ WAWATA O TE MĀORI TE TIRITI, MĀTAURANGA MĀORI AND MĀORI ASPIRATIONS

This chapter discusses how the research system can seek to understand and honour Te Tiriti obligations and opportunities, reimagine how to give life to Māori research aspirations, and explores pathways to a modern research system for Aotearoa that is Te Tiriti led.

It is clear from multiple reports and our previous consultation exercises that more work needs to be done to explore how the research system can best uphold Te Tiriti obligations and opportunities. We must consider how to embed Te Tiriti within the fabric of the research system, in decision making, in our processes, in collecting advice and information, in our workforce, and in research outcomes. We need to consider the diverse ways in which Māori organise as iwi, hapū, whānau, businesses, interest groups, subject matter experts, researchers and as individuals. We need to reimagine how to give life to Māori research aspirations, the right ways to enable mātauranga Māori - Māori knowledge - in our research system and the interface between mātauranga Māori and other activities in the system.

Throughout this green paper, we have highlighted areas where the potential exists to give effect to Te Tiriti, to elevate the aspirations of Māori in the system, and create a system more responsive to Māori aspirations. This section outlines further proposals intended to give better effect to Te Tiriti. The section draws heavily on a large body of work from Māori scholars and experts, and, in particular, the reports *Te Pūtahitanga: A Tiriti-led science-policy approach for Aotearoa New Zealand*⁴ and *Ko Aotearoa Tēnei: A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity: Wai 262*⁵. We acknowledge the authors of these works, and the Wai 262 claimants, for their thoughtful and generous contribution to the national discussion.

2.1 HE AHA TE RARURARU, ARAWĀTEA RĀNEI E HIAHIA ANA MĀTOU KI TE WHAKATUTUKI? WHAT PROBLEM OR OPPORTUNITY ARE WE TRYING TO ADDRESS?

Lack of recognition of Te Tiriti, and protection and support for mātauranga Māori in New Zealand, is well documented. The Waitangi Tribunal described in *Ko Aotearoa Tēnei* that: "successive colonial and post-colonial governments in New Zealand have been hostile to the survival of Māori culture generally and of mātauranga Māori in particular" (p 576)⁶. On the RSI system specifically, the Tribunal took the view that mātauranga Māori remained "clearly at the ... margins" (p 573)⁷.

The authors of *Te Pūtahitanga* point to entrenched values that result not only in Māori knowledge continuing to be undervalued within the RSI system, but also "underinvestment in Māori research infrastructure, Māori capacity and Māori science advice." They argue (p 17):

Within the RSI sector generally, there is a strong belief that Western science is universal and culture-free, and that it should be as values-free as possible... It is the belief in objectivity and universality that enables Western scientists to hold their own knowledge system above others, often in a non-critical way.⁸

The *Ko Aotearoa Tēnei*, *Te Pūtahitanga* and *Te Pae Kahurangi*⁹ reports all acknowledge that misappropriation and mismanagement of mātauranga Māori has occurred within our system. The dual challenges of underinvestment in and mismanagement of mātauranga Māori highlights an overarching need to strengthen the ways our system understands and invests in mātauranga Māori. Our research system needs stronger and explicit processes, procedures and mechanisms to ensure that mātauranga Māori is not misappropriated within our system, and that the mana or mandate for its use is appropriately retained by its Māori owners or kaitiaki.

As noted, we have highlighted areas throughout this green paper where the potential exists to address the issues discussed above. This work programme provides the opportunity to rebuild the RSI system with Te Tiriti and Tiriti partnership as a foundation, to enhance the special features of the system that set New Zealand apart from other advanced economies, and that are integral to building a world-class research system.

4 Ngā Pae o te Māramatanga. (2021). *Te Pūtahitanga: A Tiriti-led Science-Policy Approach for Aotearoa New Zealand*. www.maramatanga.co.nz/publication/te-p-tahitanga-tiriti-led-science-policy-approach-aotearoa-new-zealand

5 Waitangi Tribunal. (2011). *Ko Aotearoa Tēnei: A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity*. https://forms.justice.govt.nz/search/Documents/WT/WT_DOC_68356054/KoAotearoaTeneiTTIW.pdf

6 Waitangi Tribunal. (2011). *Ko Aotearoa Tēnei: A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity*. *Te Taumata Tuarua Volume 2*. https://forms.justice.govt.nz/search/Documents/WT/WT_DOC_6835606/KoAotearoaTeneiTT2Vol2W.pdf, page 576.

7 Waitangi Tribunal, 2011, above note 6.

8 Ngā Pae o te Māramatanga, 2021, above note 4.

9 Ministry of Business, Innovation and Employment. (2020). *Te Pae Kahurangi: Positioning Crown Research Institutes to collectively and respectfully meet New Zealand's current and future needs*. www.mbie.govt.nz/assets/te-pae-kahurangi-report.pdf

2.2 TE HUARAHI E MAROHITIA ANA PROPOSED APPROACH

KEY QUESTION 4: How would you like to be engaged?

Open and genuine engagement with Māori will be vitally important to the development of a research system that gives effect to Te Tiriti.

We are particularly interested to hear about Māori preferences for engagement as we move through any programme of work arising from this Future Pathways green paper, which will continue for some time following the initial consultation period.

As an individual researcher, member of a representative body, representative of your iwi, user of research, or any other role you may hold, we are keen to hear how best to organise our ongoing engagement with you. This could be individually, as part of a reference group, during broader consultation exercises, such as this one, or in any other context that would work well.

We would also like to know what roles Māori should take in the work programme and how these roles should be organised and appointed; they could include governance, decision-making, advising, undertaking analytical work, or any other ideas you might have.

We do not expect this green paper to be our only avenue of engagement on this work programme. We will seek to create ongoing and appropriate opportunities to engage with Māori throughout any reform processes that follows this consultation. Te Tira Whakahihiho, a working group comprising Māori RSI experts (together with MBIE officials) has already provided advice on the content of this green paper. We will continue to engage with Māori, encompassing more and diverse Māori groups and interests as the programme of work expands.

2.3 TE WHAKAMANA ME TE WHAKAHAUMARU I TE MĀTAURANGA MĀORI ENABLING AND PROTECTING MĀTAURANGA MĀORI

KEY QUESTION 5: What are your thoughts on how to enable and protect mātauranga Māori in the research system?

We acknowledge the rich ecosystem of mātauranga Māori that exists across Te Ao Māori. Section 2.1 describes how the research system needs better ways to support mātauranga Māori, as it does well with other kinds of knowledge.

Enabling mātauranga Māori in our research system gives effect to the obligations and opportunities embodied in Article 3 of Te Tiriti. This underpins a commitment that Māori and Māori knowledge will be provided equitable support and access to the resources, tools, research institutions, developments, impacts and generated outcomes of the system as other research knowledges that are currently supported.

Mātauranga Māori is also a taonga Māori, which means it has special provisions under

Article 2 of Te Tiriti. In particular, this provides that the rangatiratanga relationship Māori have with their taonga, as owners, kaitiaki and benefactors, should be appropriately protected and retained throughout any enablement, use, development and application of mātauranga Māori within the research system.

As we have described in section 2.1 above, we need to strengthen the ways in which our system enables and protects mātauranga Māori. Creating better pathways whereby mātauranga Māori can obtain funding and support from the research system, as other knowledge systems do, can help accelerate and amplify the distinctive contribution of mātauranga Māori. Better protections will ensure mātauranga Māori is enabled responsibly and ethically, in a way that protects the rangatiratanga of its owners and kaitiaki.

We would like to explore ideas on how our research system can better enable and protect mātauranga Māori. We anticipate that there will be no single way to achieve this. A suite of approaches may be needed at different times, and at different parts of our system, and where mātauranga Māori interfaces with other knowledge systems. Approaches could include a mixture of focussed and distributed mātauranga Māori expertise, a leadership or advisory body or bodies, the integration of mātauranga Māori experts across key organisations and agencies, mechanisms to coordinate mātauranga Māori expertise. It could include processes to enable and routinize the development of new policies, guidelines and tools for emerging and reapplied mātauranga Māori, and as new technologies, challenges and opportunities present themselves.

We would like to hear your thoughts and responses to these ideas, the advantages and disadvantages of different approaches, and an appropriate role for the Crown in such processes.

2.4 TE WHAKAPAKARI HONONGA KI TE MĀTAURANGA MĀORI Ā-ROHE STRENGTHENING CONNECTIONS WITH REGIONALLY BASED MĀORI KNOWLEDGE

KEY QUESTION 6: What are your thoughts on regionally based Māori knowledge hubs?

Te Pūtahitanga and other reports have sought stronger deployment of research system resources to the regions, that is, to where Māori knowledge is practiced, and where mātauranga Māori experts and practitioners live and work. Supporting and mobilising mātauranga Māori has been seen to hold great and distinctive opportunities for communities and society as a whole. These reports have also encouraged better information and co-designing of research and policy with regional Māori communities, including whānau, hapū and iwi.

We would like to explore these ideas further. We would like to understand how stronger connections with regional Māori knowledge might be accomplished, what connections within and between other parts of the research system might help sustain and amplify the reach and potency of mātauranga Māori research, and what structures and processes might underpin and enable these connections. We would like to engage in conversations about the advantages and disadvantages of different options around these ideas, and an appropriate role for the Crown in such processes.



3

TE TUKU PŪTEA
FUNDING

3. TE TUKU PŪTEA FUNDING

This chapter discusses possible ways to reshape the funding system for the future. It covers how funding could be used to give effect to whole-of-system Priorities, reduce unproductive competition, and ensure institutions can respond and adapt to emerging opportunities.

3.1 HE AHA TE RARURARU, ARAWĀTEA RĀNEI E HIAHIA ANA MĀTOU KI TE WHAKATUTUKI? WHAT PROBLEM OR OPPORTUNITY ARE WE TRYING TO ADDRESS?

The main way the Government influences the RSI system is through funding research. What is funded, and the way it is funded, lies at the core of RSI policy. The Government funding that supports research activities has increased significantly over the past 10 years, by around 75 per cent since 2010. With it our system has grown and done much more. The system has regularly shown the value of increased investment in R&D.

However, the underpinning mechanisms by which that funding is distributed have led to precarity in organisational revenue for CRIs. Despite the overall increases, elements of unproductive competition continue across the research system. Overall, demand for support far outstrips the supply of resources in the RSI system. This makes the goal of raising national R&D expenditure to 2 per cent of GDP a bare minimum.

3.1.1 Te hono pūtea ki ngā Whakaarotau Linking funding to Priorities

As noted above, the current system suffers from weak links between funding and strategic research needs. Proposals here are designed to address this problem by setting specific Priorities through a single process, funding those Priorities explicitly and directly, and having the allocation within the Priorities linked to research strategies.

3.1.2 Te whakaiti i ngā raruraru o te whakataetae korehua Reducing problems of unproductive competition

We have observed that the RSI system contains elements of unproductive competition. Sometimes competitions become competitions for revenue between organisations rather than of the best teams or ideas. High-stakes revenue competitions can form barriers to collaboration and connections between organisations. We have also heard about behaviour that treats stakeholder relationships as inputs into funding bids rather than as valued outcomes in their own right. This problem is often cited by both Māori and industry, who are sometimes asked to provide support for funding applications but then experience little subsequent engagement.

Funding competitions, such as Endeavour and Marsden, are, and will remain, important components of the research system. If we adopt a new model of national research priorities, as suggested in this green paper, it will be important that parts of the research system are not solely priority driven, to allow for wide ranging innovative and transformative research. Researchers need to be able to investigate future opportunities for New Zealand whether or not they align with existing conditions or priorities. Funding competitions will continue to be an important aspect of this part of the system. However, the system must ensure that competition within these funds remains productive and does not result in unintended outcomes.

3.1.3 Te whakarite kia taea e ngā whakahaere rangahau te urutau ki ngā whakaarotau panoni Ensuring research organisations can adapt to changing priorities

CRIs in New Zealand rely heavily on various streams of government research funding for revenue stability. The mismatch between the function of these funds (supporting research awarded through various processes) and their practical use (supporting organisations to keep the lights on) means changing priorities, or the results of funding competitions, can represent a significant disruption to CRIs. This in turn makes it challenging for government to evolve or adapt research priorities over time.

3.1.4 Te tuku pūtea tika ki ērā mea e hira ana ki a mātou Properly funding things we think are important

Numerous reports on the research system have observed that dedicated funding should be provided for critical research functions, high priority services, emergency response and databases and collections. In the current state, and in the context of slightly different arm's-length funding arrangements, specific funding decisions on these items are delegated to research organisations to manage and trade off against other priorities. This means research organisations often face hard choices about balancing research services against each other or against other research functions, without priority guidance from the Government. Research organisations also lack dedicated funding sufficient to maintain all aspects of their operation. Some of these same problems are visible for research infrastructure, which is discussed in chapter 6.



3.2 NGĀ TAUMAHĪ MATUA TUKU PŪTEA FUNDING CORE FUNCTIONS

The 2020 *Te Pae Kahurangi* report recommended that dedicated funding should be provided for critical research functions, high-priority services, emergency responses and databases and collections.¹⁰ The underpinning concept is that certain functions or services exist that developed countries and small advanced economies, such as New Zealand, expect their governments to perform that deliver a standard of living that distinguishes them from other nations. Where these functions are identified, government should fund them and specifically ensure their viability in the same way as, for example, a tax system or police force. One possible model for this is the way the Government funds the Measurement Standards Laboratory, which is part of Callaghan Innovation, but has its own dedicated, ring-fenced budget and supporting legislation.

We consider at least three categories of activity exist that could meet the test of being a 'core function':

1. **Critical research:** research capability that is essential to New Zealand's functioning as a country. For example, ongoing research into infectious diseases and cybersecurity threats.
2. **High-priority services:** these are not necessarily research activities in themselves but might provide data input into research or require scientific expertise to function. Seismic monitoring or forensic laboratories might fall into this category.

¹⁰ Ministry of Business, Innovation and Employment. (2020). *Te Pae Kahurangi: Positioning Crown Research Institutes to collectively and respectively meet New Zealand's current and future needs.* www.mbie.govt.nz/assets/te-pae-kahurangi-report.pdf

3. **Databases, collections and monitoring:** data are necessary to understand the status and health of resources, to support research and to serve various other functions. For example, weather data have both commercial and public good value, and type specimen collections support national biosecurity and biodiversity conservation systems.

Common to all of these activities is that they are intuitively important, but it is hard to be precise about what exactly should belong on a complete list. Government has access to finite resources but lacks a finite list of activities that fit the general description of a core function. Determination about what is critical will need to reflect the diversity of values in our society and Te Tiriti.

In addition, New Zealand has various arrangements for managing such activities, for example:

- Our criminal forensic laboratories, which are housed in the Institute of Environmental Science and Research but paid for through a contract with New Zealand Police
- Our weather monitoring systems, where ownership of the monitoring network is shared between the National Institute of Water and Atmospheric Research and MetService, but forecasting and other attendant services are provided by different public and private organisations
- Our geophysical monitoring system operated by GNS Science through the GeoNet programme, paid for by the Earthquake Commission, Land Information New Zealand and MBIE
- Scientific collections, some of which are funded centrally and some of which are housed in and paid for by museums or universities, as well as CRIs
- Our biosecurity facilities, where laboratory capability is partly owned, paid for and housed in the Ministry for Primary Industries, while also being heavily reliant on the CRIs.

We are not recommending any of these arrangements over others, except to note the following international trends. In small economies, it appears research functions – those designed and intended to generate new knowledge – tend to be housed deliberately in research organisations. Conversely, service or monitoring functions – where a proven service is delivered repeatedly or data are collected on an ongoing basis – tend to be housed with service agencies or government departments. Given they are all eventually funded by government, the distinction may appear academic. But individual organisations will tend to make resourcing decisions within the scope of their organisations. A geological survey undertaken by a government department will have the resources needed to carry it out judged against other government functions, such as providing policy advice.

A geological survey undertaken by a research organisation will have its resources judged against competing research activities. We cannot avoid the fact that finite resources will lead to choices that need to be made. We can, however, try to make those choices as sensible as possible.

3.2.1 Ngā kōwhiringa matua mō ngā taumahi matua **Key design choices for core functions**

KEY QUESTION 7: How should we determine what constitutes a core function and how should core functions be funded?

If we proceed with this proposal, we will need to determine what constitutes a core function and how this differs from a research programme. We need to develop a set of criteria that let us identify core functions and apply limited resources effectively to things we think are important.

We will need to consider how to make resourcing decisions about these functions, who should make them, and what the most effective model is for housing and managing distinct types of core functions. For example, who should be responsible for determining the distribution of scarce resources amongst the things we think are important; how can we ensure determinations of 'what is important' uphold Te Tiriti and the different values and views held in communities; and what is the best arrangement for organising these functions?

3.3 HE PĒHEA TĀ MĀTOU TUKU PŪTEA KI NGĀ WHAKAHAERE RANGAHAU **HOW WE FUND OUR RESEARCH ORGANISATIONS**

Numerous reports and commentaries have emphasised the importance of stable funding for CRIs. And CRIs report that uncertainty about future funding complicates medium-term planning and reduces their scope to commit to long-term partnerships. It can also affect their capacity and capability to innovate through targeted risk taking. We have also noted problems with unproductive competition in the system.

This green paper outlines proposals to focus the system on priorities that would be determined independently of research organisations. We need the system to be adaptive to these priorities and resilient in the face of change, or choices on research priorities will be constrained by the circumstances of the research organisation.



We have the potential to resolve this contradiction by re-examining the way government funds research organisations.

Vote: Tertiary Education funds, such as the Performance-Based Research Fund (PBRF), are out of scope for this green paper.¹¹ We recognise, however, that submitters may have thoughts on the relationship between the PBRF and the funding model changes proposed, and we are interested in any feedback you have on this.

3.3.1 Ngā whai wāhitanga ki ngā tauira tuku pūtea rerekē **Opportunities for different funding models**

Unlike most other countries, New Zealand funds the 'full cost' of research through an overhead component calculated as part of project- or programme-specific research grants. We do not allocate specific grants to fund overhead costs for organisations. Funding to maintain buildings, pay non-research staff, invest in infrastructure, and basically keep the lights on, is all delivered as a percentage top-up on research contracts. This means some research organisations, particularly CRIs, can be heavily exposed to the outcomes of funding competitions and changing national priorities. The end of a research grant does not just mean the end of that research project, it also means the end of the funding for the fraction of buildings, information technology, human resources services and other overheads that were attributed to it.

We could instead fund some or all of these costs through a specific grant. The stability of a base grant designed to meet ongoing costs could allow research organisations to be

¹¹ The PBRF is a bulk funding mechanism, designed to encourage and reward high-quality tertiary education research, across all subject areas and types, in degree-granting TEOs.



far more adaptable and resilient to future changes in Priorities than they are at present. It could also allow funding competitions to fulfil their function completely and become forums for a competition for the best new ideas generated by the research community.

The idea of providing research organisations with a base grant separate to specific research funding is not new. It is the way most other countries' research systems have worked for a long time; in fact, it is hard for us to identify another country that funds research the way we do. Harmonisation with international systems is another important argument for changing the way we fund research, because it would reduce barriers to research organisations participating in international research programmes.

We would like feedback on all aspects of this proposal, including factors that would make this proposal more or less successful, whether you know of international schemes like this that work well or poorly, and, if so, why.

3.3.2 Ngā kōwhiringa hoahoa mō tētahi tauria tuku pūtea hou **Design choices for a new funding model**

KEY QUESTION 8: Do you think a base grant funding model will improve stability and resilience for research organisations, and how should we go about designing and implementing such a funding model?

Our starting position for considering changes to the research funding model is that, as far as possible, **the research funding regime should provide a level playing field for different types of research organisation**. While different types of research will need different types of funding, we do not want research to be funded differently simply because it is done by different types of organisations. A funding regime that deliberately funds research differently solely on the basis of the type of organisation is likely to create or exacerbate barriers to connection between organisations, increase fragmentation, and be complex and confusing to operate.

There are three subsequent design choices we need to address to evaluate the potential value of a base grant regime.

- 1. Who gets a base grant?** A starting point is to examine which organisations receive RSI funding that comes with an overhead component. Universities and CRIs make up most of these recipients, but the list includes independent research organisations, district health boards, businesses and museums. Of these organisations, some will sometimes be in receipt of RSI funds and other times not, meaning their case for receiving an ongoing base grant is less clear cut. We need to consider whether all of these organisations would receive a base grant and what the implications are if some do not.
- 2. What would a base grant pay for?** Such a grant could mirror current settings and pay for non-attributable costs, such as corporate overheads and research infrastructure. The potential is, however, that a base grant could also meet a greater proportion of research costs, including a proportion of, or even full, salaries. This latter option would support the goal of a much stronger approach to the research workforce and provide maximum stability, but it could also leave much less funding available for allocation through priorities and competitions. We need to consider how to achieve this balance and what other factors are involved when choosing between a larger or smaller base grant.
- 3. How would the sum awarded as a base grant change over time, and can an organisation enter or leave the base grant scheme?** Allocations within the scheme would almost certainly need to be variable over time, to deal with changes



in organisations based on the research they were undertaking. But the basis for how this change should take place is not obvious. Generic options for varying the level of grant include:

- a performance-based system, where metrics are used periodically to adjust levels of funding. An important choice about such a system would be the metrics chosen as a basis for adjustment
- an activity-based system, where funding is adjusted periodically to match the quantified level of activity within the research organisation
- a negotiated system, where government makes periodic judgements about the relative investments appropriate to different research organisations.

A funding system could also combine one or more of these features. All options have advantages and disadvantages, and all run the risk of addressing one presenting problem while creating or exacerbating another. We would like to explore the advantages and disadvantages of these options and whether some are clearly better than others.

The idea of varying a base grant over time also raises the possibility that, at some point, a research organisation's grant allocation may drop to zero. But enabling research providers to enter or leave the base grant scheme under certain conditions may be a valuable design feature. For example, it could be a way to resolve problems raised in the design choices on who gets a base grant. We would like to explore whether we could usefully make a base grant an optional component of a funding system, if research organisations preferred to remain in the current system.



4

NGĀ HINONGA INSTITUTIONS

4. NGĀ HINONGA INSTITUTIONS

This chapter focuses on the design and shape of research institutions, to enable them to give effect to whole-of-system Priorities and be adaptable in a fast-changing world.

4.1 HE AHA TE RARURARU, ARAWĀTEA RĀNEI E HIAHIA ANA MĀTOU KI TE WHAKATUTUKI? WHAT PROBLEM OR OPPORTUNITY ARE WE TRYING TO ADDRESS?

In 2010, the Government reasserted the importance of the public good mission of CRIs through the CRI Taskforce. Our CRIs are, by design, focused on traditional sectors of the economy, such as food and fibre, and aspects of the environment and natural hazards. They have performed exceptionally well in their respective focus areas.

However, public good research extends beyond these sectors. We need to consider how to enhance and extend this role into broader challenges and opportunities for the country, as well as speak to the needs of a more productive future economy. We also need to consider that all research of importance to New Zealand does not, and does not need to, take place in CRIs. Our Universities, other tertiary education organisations (TEOs) and independent research organisations undertake slightly more research in aggregate than our CRIs, and have made outstanding contributions to national life. The co-production of excellent research and excellent researchers that occurs in tertiary organisations is an enormously valuable aspect of their operation. We need to consider how to encourage greater dynamism and fluidity across different types of organisations.

Despite the significant recommendations of the 2010 CRI Taskforce, our CRIs have remained within the same operational form and design as that established in the early 1990s. It is timely to assess the design and organisation of these institutions. This will ensure we continue to have sound design principles, because the structural limitations of the current operating model for CRIs are becoming increasingly evident. Recent reports such as *Te Pae Kahurangi*¹² highlight many of these limitations, including:

- ▶ lack of role clarity and fragmentation
- ▶ complexity, creating confusion and adding transaction costs
- ▶ unhelpful competition that hinders meaningful collaboration
- ▶ siloed strategies and priority setting
- ▶ inability to adapt to changing contexts and emerging opportunities
- ▶ ineffective and inefficient resource use
- ▶ poor financial and organisational resilience.

12 Ministry of Business, Innovation and Employment. (2020). *Te Pae Kahurangi: Positioning Crown Research Institutes to collectively and respectively meet New Zealand's current and future needs.* www.mbie.govt.nz/assets/te-pae-kahurangi-report.pdf

In addition, a growing body of research and commentary suggests problems of institutional racism in our research institutions¹³. As discussed further in chapter five (workforce), equity, diversity and inclusion are vital to a thriving research system. Where there are structural or institutional barriers to a diverse research workforce, we need to understand those and address them.

4.2 ME WHAKAHOU NGĀ MĀTĀPONO HOU ME NGĀ KŌWHIRINGA I HANGAIA AI Ā MĀTOU HINONGA RANGAHAU NĀ TE KARAUNA (CRI) DESIGN PRINCIPLES AND CHOICES THAT FORMED OUR CRIS NEED TO BE REFRESHED

Our CRIs were created in the early 1990s. Their design features were heavily weighted towards classic microeconomic structures, market values and mechanisms, and commercial discipline. This focused on the separation of policy, funding and doing research. The current operating model for CRIs is, by design, decentralised, and parts of the system were designed specifically for the economy of the 1990s, focusing on sectors that extracted value from food and fibre. The early disestablishment of the social research CRI has meant a lack of a clear 'home' in the research system for this vital mode of investigation.

New Zealand's economic and social make up and aspirations have shifted since that time. We need organisations that are able to respond adaptively to a changing future and that are dynamic, connected and linked closely to each other. Our CRIs, TEOs and other research organisations need to operate within a framework that encourages collaboration across institutional boundaries. Any new design needs to point towards a more seamless and fluid model, where different types of organisation appear less distinct and separate.

4.2.1 Te tauria whakahaere ā-kamupene mā ngā CRI Company model of operation for CRIs

CRIs are set up as companies. The current operating model is organised as seven standalone and separately governed organisations that are all Crown owned. The Companies Act 1993 imposes duties on directors to act in the best interests of the company. The CRI Act 1992 specifies the primary purpose of CRIs is to provide research for the benefit of New Zealand (while acting in a financially responsible manner). The 2020 report *Te Pae Kahurangi* suggests this tension can impede collaborations that would contribute to the national benefit (p 6):

The CRI Act requires CRIs to undertake research for the national benefit. The Companies Act status of CRIs creates a duty for directors to act in the best interests of the company. In organising to tackle increasingly interdependent research problems, this duty is not a good foundation for a collaborative operating model for CRIs. The financial and liability frameworks of the Companies Act can be a complication for CRIs in emergency response.¹⁴

The company model creates a strong focus on the commercial performance of individual CRIs. However, much CRI activity is for public benefit. Te Pae Kahurangi found that about

13 e.g. McAllister, TG; Kokaua, J; Naepi, S; Kidman, J; Theodore, R (2020). Glass Ceilings in New Zealand Universities. *Mai Journal*. DOI: 10.20507/MAIjournal.2020.9.3.8

14 See *Te Pae Kahurangi: Positioning Crown Research Institutes to collectively and respectively meet New Zealand's current and future needs*, above note 12.

two-thirds of CRI funding was from various central and local government entities. In certain circumstances, CRIs may prefer to lean towards commercial gains from research, rather than maximising the public good (for example, by making research results more freely available). The 2010 CRI Taskforce report notes (p 7):

Currently, it is not clear if a CRI's objective is to create value for itself, as a company, or to generate value for New Zealand. Current ownership arrangements seem to place undue emphasis on research and development that produces outputs that individual CRIs can capture in their statements of revenue and balance sheets, rather than on research that contributes to the wellbeing and prosperity of New Zealand. This can reduce quite significantly the overall impact of government investment in CRIs.¹⁵

The original decision documents that established CRIs in the early 1990s place strong emphasis on responsible financial management, incentives to improve efficiency and the efficient deployment of capital in management decisions.

However, optimising these factors from the viewpoint of an individual organisation may not be the same as optimising from a national perspective. Other models of organisational constitution are available that may place less weight on individually optimised financial management and more weight on maximising the public good benefits of the research conducted. It is unclear if these aspects of operation have been optimised according to the original design principles. CRIs will sometimes act against their own financial interests to act in the public good, to the detriment of their revenue stability, capital planning and financial outlook. Directors sometimes face unnecessarily difficult choices within the current structures.

In considering the problems about organisational format, we must remember that a reasonable amount of the work in CRIs is not strictly focused on pure public good applications. Some CRIs derive a substantial proportion of their income from commercial sources. Any alternative organisational format will need to recognise the importance of these more commercial relationships and consider their potential future state when weighing up different models.

Te Pae Kahurangi also queried the appropriateness of the company operating model when considering emergency responses. In such situations, where a high degree of criticality is attached to government activities, it may be more appropriate to house functions in organisations that are closer to central government in organisational form and funding. Similarly, for core activities where only one sensible provider exists – national seismic monitoring might be a good example of this – the benefits of a company operating model are not really applicable even where they do apply, so a different type of organisation may be more appropriate.

4.2.2 Te whakataetae korehua me ngā tauārai ki te pāhekoheko puta noa i ngā whakahaere rangahau katoa **Unproductive competition and barriers to collaboration across all research organisations**

The current system is not well suited to pursuing opportunities that cross institutional boundaries, be they CRIs, TEOs, independent research organisations, or businesses. As discussed in chapter 3, competition for limited funds often limits collaboration at institutional level and results in an overall lack of connectivity. The need to generate

revenue often leads to unhealthy competition between institutions, and financial considerations winning over benefit considerations in decision-making. Revenue generation can form a barrier to sharing resources and expertise and promotes contest between organisations rather than of ideas in contestable funding mechanisms.

4.2.3 Ngā hononga kaiwhāpānga kurutete **Transactional stakeholder relationships**

Stakeholder relationships may also be constrained by the current model. Stakeholders' views of relationships with CRIs are mixed, with satisfaction often related to the degree of influence stakeholders feel they have over CRIs' research. Research users provide a crucial link in research uptake and delivering impact, and some have reported difficulties in building strong research relationships with CRIs or difficulty navigating the system and finding a point of entry to working with CRIs.

Recent reports have also highlighted difficulties for Māori, particularly in getting CRIs to actively engage and partner in research, and creating meaningful and enduring relationships beyond what is often seen as token engagement to meet requirements of funding rounds.

Reports on university responsiveness are similarly mixed. New Zealand's industry investment into universities is low by international standards. This and other similar metrics point towards ongoing difficulties connecting into and out of university research.

4.2.4 Te kore āhei ki te urupare ki ngā whakaarotau pūnaha me te kore urutaunga **Inability to respond to system priorities and lack of adaptability**

The current model also constrains CRIs' ability to respond to strategic priorities and complex interdependent research due in part to its narrow institutional design. Our CRIs have fixed core purposes that give them limited ability to flex and change direction in response to the changing world. This limits their ability to be future focused and hinders the system's ability to respond to broad challenges that need a connected approach, drawing from multiple disciplines and sectors. Conversely, universities tend to be more flexible and adaptive when it comes to the changing research landscape; this makes a further case for lowering the boundaries between different types of research organisation.

4.2.5 Te kore mahi tahi ki ngā haumitanga haupū rawa me ngā rawa nunui **Lack of coordination for large property and capital investments**

There is currently no overall co-ordination of major RSI system property and capital investments. Decisions on capital investments are largely institution specific and driven by institution-specific benefits, potentially at the expense of system-wide benefits. This applies to both property and large research infrastructure investment.

4.3 TE TŪNGA O CALLAGHAN INNOVATION I ROTO I TE PŪNAHA RANGAHAU, PŪTAIAO ME TE AUAHATANGA (RSI) **ROLE OF CALLAGHAN INNOVATION IN THE RSI SYSTEM**

The changes we make to the research system to make it more connected, adaptive and resilient will also require us to think about how it interacts with the innovation system.

¹⁵ Crown Research Institute Taskforce. (2010). *How to enhance the value of New Zealand's investment in Crown Research Institutes: Report of the Crown Research Institute Taskforce.* www.mbie.govt.nz/assets/7502750043/how-to-enhance-the-value-report-of-the-cri-taskforce.pdf

The Productivity Commission's report on frontier firms notes the importance of upgrading New Zealand's innovation ecosystems to support lifting national productivity and wellbeing.¹⁶ We need to consider the role of an innovation agency and innovation infrastructure.

New Zealand's innovation agency, Callaghan Innovation, performs various roles within a single entity:

- ▶ It is an operational delivery agency that administers grant and other funding programmes in the innovation sector, for example, project grants, incubators and accelerators, and the technology incubator programme.
- ▶ It is an advocate for innovative businesses within government.
- ▶ It charges a fee for R&D services in advanced manufacturing and materials, data and sensing, biotechnology, and measurement and standards.
- ▶ It is a connector, navigator and facilitator between innovative businesses, business services and the wider public research sector.

Sometimes roles conflict or are perceived to compete with the interests of potential partners in the public research system in ways that form barriers to collaboration. While considering the design of the public research system, we should also consider its interactions with the innovation system and institutions so we can increase collaboration and connections across the system.

System changes also provide an opportunity to think about how we tackle one of the biggest weaknesses of the innovation system to date: poor connections between New Zealand firms and public research institutions. Without strong connections, it will be a struggle to bring together the diverse ideas, knowledge, capabilities and investment needed to innovate at the global frontier.

¹⁶ New Zealand Productivity Commission. (2021). *New Zealand Firms: Reaching for the frontier*. www.productivity.govt.nz/assets/Documents/Final-report-Frontier-firms.pdf



4.4 NGĀ KŌWHIRINGA HOAHOA HIRA MŌ TE WHENUA ĀPŌPŌ KEY DESIGN CHOICES FOR THE FUTURE STATE

We need our institutions to be collaborative, adaptive, agile, and enabled to respond to Priorities. We need to consider how best to position our public research institutions for the future. This includes thinking about their design, organisation, governance and remit, and their future role within the RSI system.

4.4.1 Te āhua, whakaruruhau me te hanganga o te whakahaere Organisational form, governance and structure

KEY QUESTION 9: How do we design collaborative, adaptive and agile research institutions that will serve our current and future needs?

We would like feedback on the organisational form, governance and structure of future public research institutions.

For this question, we are also asking for feedback on potential changes to CRIs and what future public research organisations might look like.

Although we are not actively considering changes to the institutional design of other research organisations through this process, we are interested in comments and ideas about the relationship between those future organisations and other research organisations (such as universities).

International models suggest global trends towards:

- ▶ fewer and larger organisations
- ▶ structural reforms that enhance connectivity with universities and focus on industry-targeted research
- ▶ reforms that position public research institutions as part of a national research system rather than inputs into a specific government department or economic sector
- ▶ use of funding, rather than institutional design, as the main strategy implementation lever.

We think fewer, larger and more resilient organisations would result in greater connectivity and interdisciplinary research, creating hubs of capability across multiple sectors. Reconsidering and broadening the narrow, fixed core purposes of public research institutions (for example, by grouping aligned disciplines) would allow more effective collaboration, to tackle research missions, and allow responses to broad challenges that require a connected, multidisciplinary approach.

Larger and more financially resilient institutions may also have greater agility in responding to government priorities, industry demands and emerging opportunities. Larger institutions may also allow more effective and efficient deployment of resources, to grow capability in areas of national importance, and ensure a broad base of public sector RSI capability to support innovation across the whole economy.

Various policy choices are available for fewer, larger organisations that focus on the basis on which they would be constituted.

Our design choices for organisational form, governance and structure are:

- 1. Operational form:** We have seen the limitations of the company operating model. What are the main design aspects we should consider when deciding the operating and institutional model of the future?
- 2. Size and remit of institutions:** We need to consider the role of size and remit of organisations in ensuring more institutional resilience and adaptability. Larger organisations would be more stable but may be less agile in pursuing emerging opportunities and changes.
- 3. Research focus:** In the 1990s, CRIs were intentionally designed to focus on specific economic sectors or aspects of the natural environment to “operate in fields of strategic importance to New Zealand” at that time. We need to consider how the remit and focus of research institutions are decided and how this enables interdisciplinary collaboration and complex challenges to be addressed.

4.4.2 Te whakawhanaketanga me te tautiaki pai ake o te hunga mahi me te raukaha **Better workforce and capability development and maintenance**

KEY QUESTION 10: How can institutions be designed or incentivised to better support capability, skills and workforce development?

We consider that research institutions will have vital roles to play in workforce capability planning and development, and provide rewarding career pathways for researchers.

For this question, we are asking for feedback on all research organisations, including TEOs.

We discuss in chapter 5 the investment mechanisms that might support the development of career pathways, increase diversity and reduce precarity. Here we are interested in feedback on aspects of organisational incentives, design or remit that will better support capability development, talent development and attraction, and offer more flexible and diverse careers and career pathways to researchers.

In particular, we would like to explore the roles research institutions should play in capability and skills development and how to better coordinate this across the RSI system. We would also like to look at ways institutions can support the movement of researchers around the RSI system.

4.4.3 Te ruruku pakari ake me te arotautanga o ngā haupū rawa me ngā rawa nunui **Stronger coordination and optimisation of large capital investments and property**

KEY QUESTION 11: How should we make decisions on large property and capital investments under a more coordinated approach?

We discuss future research infrastructure funding in chapter 6. Here we consider how better coordination of property and capital investment and co-location can enable stronger connections between researchers across the RSI system and support institutional resilience through the efficient and effective use of resources.

Internationally, co-location, particularly between universities and public research institutes, has offered the potential to:

- increase spill overs from researcher interactions to drive innovation and economic growth
- share facilities and equipment, leading to more efficient use of capital
- decrease the transaction cost of collaboration and connectivity across the RSI system
- enable more fluid redeployment of property and infrastructure in the future
- enhance adaptability and resilience as research institutes change in response to new opportunities and changing demands.

We are interested in feedback on how we could achieve a good balance between institutional autonomy and system benefits. This includes who should be involved and consulted in decision-making on large property investments and how we ensure universities and other parts of the research system are included in a more coordinated approach regarding large capital and property investments.

4.5 TE TAUTOKO I NGĀ WAWATA O TE MĀORI SUPPORTING MĀORI ASPIRATIONS

KEY QUESTION 12: How do we design Tiriti-enabled institutions?

We discuss in previous chapters our proposed approach to strengthening the RSI system to achieve outcomes for Māori and elevate the aspirations of Māori within it. This includes honouring obligations to and opportunities of Te Tiriti in the RSI system, better enabling mātauranga Māori and the interface with mātauranga Māori, measuring and monitoring the impact of investment in RSI for Māori and other activities in the research system.

Here we are considering how to design institutions to give effect to Te Tiriti, or how institutions can be better enabled to create enduring and meaningful partnerships with Māori and meet Māori aspirations.

We would like to explore how we design institutions within our research system in partnership with Māori, and what Tiriti empowered research institutions would look like.

We are interested in feedback on what partnership and co-development should look like in institutional design and how we enable institutions to listen to voices and views from across Te Ao Māori.



4.6 NGĀ PĀPĀTANGA PAI AKE – TE WHAKAWHITI MŌHIOHIO ME NGĀ PĀPĀTANGA RANGAHAU BETTER IMPACT DELIVERY – KNOWLEDGE EXCHANGE AND RESEARCH IMPACT

KEY QUESTION 13: How do we better support knowledge exchange and impact generation? What should be the role of research institutions in transferring knowledge to operational environments and technologies?

We want the research system to achieve greater impact. By impact, we mean a change to the economy, society or environment beyond a contribution to knowledge and skills in research organisations.

Through its 'Impact of Research' work, MBIE has sought to define and implement a measurement framework for research impact.¹⁷ As part of its agenda for research impact, MBIE asked public research institutions to renew their focus on supporting researchers to explicitly plan for and increase impact from their work. CRIs have formed the Impact Planning and Evaluation Network, which is developing training and upskilling to both grow an impact culture and improve the magnitude of research impact. The University Research Offices New Zealand group is also promoting and progressing impact work within the university system. Figure 3 outlines our proposed channels of knowledge exchange between research organisations in the future.

Figure 3: Channels of knowledge exchange



Impact can be achieved through successful knowledge exchange. This exchange occurs as a result of relationships with research end users (represented on the right of the diagram), which are mediated through various channels (in the centre of the diagram).

- **People/workforce** – the flow of personnel to and from the research system and those of end users.
- **Research commercialisation and knowledge management** – the use of publicly funded research outcomes by end users, and arrangements for managing and disseminating outcomes for use, including commercial use, such as licensing, and non-commercial use, for example, by government.

¹⁷ Ministry of Business, Innovation and Employment. (2019). *The Impact of Research: Position paper*. www.mbie.govt.nz/dmsdocument/6983-the-impact-of-research-position-paper-october-2019-pdf

- **Platform technologies** – tools that are becoming standard in some end-user sectors, such as 3D printing, cloud technology and services, and the mRNA platform.
- **Collaboration** – how stakeholders from the research system interact and engage with each other and end users, for example, research–industry research partnerships.
- **Education and training** – most obviously, this is the role of TEOs. Co-creation of human capital and research in TEOs is one of their most powerful aspects. However, this could also include direct sharing of information that occurs through activities like 'executive education' or other training programmes offered by research organisations, consulting services offered by researchers to industry, the public sector and non-governmental organisations and through 'applied research' conferences and 'science communication'.

Impact is achieved through a system of channels. Many of these channels have been addressed in other chapters of this document so we focus here on research commercialisation and knowledge management. Government interventions can support the commercial and non-commercial use of research outcomes, but broader issues also exist on how institutions treat the use of their research as part of their strategy and culture, how researchers are recognised and rewarded, and how that influences researchers' attitudes and priorities.

We are asking for feedback on how to use our priority setting, funding and institutional design levers to incentivise best-practice research commercialisation, knowledge management and transfer to end users. We want to explore the extent to which institutions consider the commercial and non-commercial use of their research as a key part of their strategy and a mechanism for achieving research impact.

We are keen to investigate how to shape incentives for researchers to align their research with end users and facilitate its commercial and non-commercial use. We would also like to explore to what extent institutions recognise and reward researchers for research that aligns with and is used by end users. We would like to hear how institutions, researchers and end users would like to be engaged in processes that facilitate strong connections.

We also want to design research institutions for strong connections and dynamic, two-way exchanges between the institutions and end users, aligning research with industry, government and society. We would like to understand the barriers to industry in actively engaging with and valuing the research system as a producer of useful knowledge, and how to design institutions to overcome these barriers.

Several other countries and research systems have standardised approaches to intellectual property (IP) protection and ownership by research institutions and researchers, particularly with regards to the results of research that is publicly funded. These include policies around open access, open data, and public good distribution of research findings, as well as the ownership of any commercial aspects of IP.

We want to consider whether such approaches could be helpful in New Zealand. We are interested in helping foster a research system that facilitates commercial use but does not hinder non-commercial 'public good' use of research. We want to see institutions make timely decisions on commercial and non-commercial use of their research outcomes, informed by past successes and failures, with appropriate ownership and/or release arrangements for success. We want to establish regimes that encourage research institutions to make the best use of IP, where both organisations and individual researchers are appropriately rewarded for optimal decisions in predictable and equitable ways.

We would also like to improve further the connections between research and formation of policy. Are there design features, characteristics or modes of engagement that facilitate stronger two-way relationships between research knowledge and the formation of policy?

Ngā ara whakaarumoni Commercialisation pathways

The recent *Te Pae Kahurangi* report found that CRIs' approach to commercialisation is fragmented and subscale. It noted that, to varying degrees, each CRI has built a commercialisation capability and is pursuing opportunities but that individually these commercialisation portfolios lack the scale and diversity to manage risk and build end-to-end excellence. The report recommended (p 5) "pooling commercialisation opportunities to diversify risk and build end-to-end excellence in commercialisation capabilities".¹⁸

Commercialisation of research refers to research that can be exploited for commercial revenue, commonly through licensing or spinout companies. We have successful examples of government support for research commercialisation, including the Commercialisation Partner Network, which builds commercialisation capability in publicly funded research organisations and individual researchers, and the PreSeed Accelerator Fund, which supports research commercialisation projects. The Government's technology incubator programme also helps build start-ups based on publicly and privately funded research. We are interested in whether there is a case for scaling up some of these types of support.

We are also interested in whether an argument can be made for diversifying how we think about commercialisation pathways and therefore the kinds of support we have in place. For example, government procurement is not typically thought of as 'commercialisation' but government is a significant user and purchaser of the resulting products and services. New models and approaches to procurement might be needed to allow government to invest in new or riskier ideas coming out of the research sector. Examples of alternative commercialisation models could include collaborations, partnerships or joint ventures with businesses, and entrepreneur residencies inside research-sector organisations.

We would like to understand whether current commercialisation supports are at the right scale and how we can enable greater collaboration and pooling of commercialisation expertise and opportunities across the research sector. We would like to consider what the most effective ways are of pairing scientific expertise with commercial expertise, and what the alternative commercialisation pathways are (to spinouts or licensing) that we may want to support in the research sector. We are keen to hear what a more collaborative model for people starting with an idea outside of the research system might look like, and what support the research system could provide in these cases.

Te puna rato ariā Ideas pipeline

Feedback on the RSI system has highlighted concerns about a knowledge gap that exists between the new and good ideas generated within the research sectors and the rate these ideas are used or implemented – either turned into new products, services or even business models, used to inform public sector approaches or services, or otherwise translated into impacts by their use.

In terms of research system impact, we are aware of various potential barriers:

- ▶ Not all research findings are capable of being operationalised outside of the research environment. Sometimes this is temporary, that is, the right piece of enabling infrastructure or companion technology is not yet available, or sometimes it is permanent, that is, what works in a laboratory does not work outside of one. It can be prohibitive or sometimes impossible to establish whether this is the case early in a research programme. Some 'failed' ideas will occur. This risk is an accepted part of most research funding.

¹⁸ See *Te Pae Kahurangi: Positioning Crown Research Institutes to collectively and respectfully meet New Zealand's current and future needs*, above note 12.

- ▶ We have heard concerns from research organisations that funding contracts make them feel constrained to hold IP tightly rather than take a wider view of what the best use of the IP, both commercial and non-commercial, might be.
- ▶ A lack of absorptive capacity and capability could exist among various groups of end users. For example, the public sector has struggled to develop and implement specialised procurement policies in respect of new technologies.
- ▶ A lack of a regulatory pathways or accepted standards exists in some areas, which makes it difficult for some ideas to gain traction. For example, while drug development is well regulated for safety, sectors with less regulation have more varied paths to market and product acceptance that are sometimes difficult to navigate.
- ▶ Resources are lacking, human and funding, dedicated to knowledge pathways once research is completed.

It seems these barriers are not specific to New Zealand or its research system, although there may be reasons why some are more acute in New Zealand.

However, despite these problems, we are aware that a 'pipeline' conceptualisation of the route to research impact relies on a linear model of innovation that starts with idea generation in the research system and ends in the hands of end users, typically with a focus on commercialisation. It also tends to be 'extractive' and focuses on how to get ideas or knowledge out of the research system as efficiently as possible, rather than recognising that the process of generating impact is a complex, dynamic interaction between the research system and end users that is often ongoing. It ignores the *te ao Māori* and the need to protect and support the obligations inherent in the relationships *iwi*, *hapū* and *whānau* have with their *mātauranga* and other *taonga*. Finally, it leaves out important future-focused sectors where an end user or recipient of knowledge may not yet exist, along with the possibility of building deep ecosystems of capability that will support future frontier firms.

We are interested in exploring the extent to which the commonly used pipeline framework has to tell us about knowledge exchange, given its common use despite its conceptual drawbacks. We could consider if any further barriers exist to getting ideas out of the research system and into the hands of end users that we have not canvassed above. We would like to know how we might identify these barriers and mitigate them.

We would also like to understand further the ideal role for research institutions in knowledge exchange and generation of impact. End users and firms also have an important role in mobilising knowledge and technology; the responsibility should not and cannot sit solely with research organisations. We also need to consider cases where there might not be any current end users, and what role research institutions have in supporting and establishing the technologies and industries of a future New Zealand.

We would like to understand what processes and structures could establish clear and appropriate roles for all parties in knowledge exchange.



5

**TE HUNGA MAHI
RANGAHAU RESEARCH
WORKFORCE**

5. TE HUNGA MAHI RANGAHAU RESEARCH WORKFORCE

This chapter discusses how the research system can better support the development and retention of the research workforce, and offer attractive and flexible careers and career pathways.

5.1 HE AHA TE RARURARU, ARAWĀTEA RĀNEI E HIAHIA ANA MĀTOU KI TE WHAKATUTUKI? WHAT PROBLEM OR OPPORTUNITY ARE WE TRYING TO ADDRESS?

Our aspiration is for a research system that is more connected, diverse and dynamic, that attracts and retains excellent talent. We want to ensure the research workforce can be offered attractive and flexible careers and career pathways.

The current system does not have a strong focus on funding mechanisms that explicitly support research workforce development following qualification. The general lack of information about the RSI workforce means it is difficult to assess progress regarding career stages, demographics, employment terms and fields of research. This makes it difficult to robustly evaluate issues, and we do not have a strong evidence base to assess the effect of policy interventions or measure progress towards achieving workforce goals.

We are developing an RSI workforce survey that will help inform our policy development on workforce issues and opportunities. In the context of the Future Pathways programme, we will be able to use the survey to consider responses to issues such as:

1. Equity, diversity and inclusion

Equity, diversity and inclusion are vital to a thriving research system. We need a system which has no barriers to entry or advancement for women, Māori, Pacific peoples, people with disabilities, and members of LGBTQI+ communities.

There is strong evidence that women, Māori and Pacific peoples experience greater barriers to participation and progression in the RSI workforce than male European colleagues. This is particularly clear for senior roles and leadership positions, with PBRF data showing a significantly smaller proportion of women, Māori and Pacific peoples in these roles at universities, compared with the proportion of those gaining research degrees or in early career positions.

These issues affect retention and cannot simply be resolved by hiring greater numbers of women, Māori and Pacific peoples. Researchers from diverse backgrounds can feel undervalued or tokenised in the workplace. In particular, the *He aronga takirua* study details that Māori are often expected to work a double shift: as a researcher and as a cultural expert.¹⁹ This can result in unreasonable workload expectations and career burn out.

¹⁹ Haar, J and Martin WJ. (2021). *He aronga takirua: Cultural double-shift of Māori scientists. Human Relations*. <https://doi.org/10.1177/00187267211003955>



Career precarity for early career researchers

Recent papers from the Royal Society and New Zealand Association of Scientists have noted that early career researchers are particularly vulnerable to career uncertainty and precarity. While career precarity varies by field and organisation, it can limit retention of talent and disproportionately affects women, Māori and Pacific peoples who are more likely to be in early career roles.

In addition, relatively few funding mechanisms exist for early career researchers, such as post-doctoral fellowships, so these positions can be particularly dependent on the results of competitive funding rounds.

New Zealand has generally followed the traditional international model where post-doctoral roles are fixed-term positions before progression to permanent senior positions. We are interested in your views on whether this model is working well. A functioning system should offer sufficient mechanisms to support career progression, such as appropriate development and leadership opportunities, and progression should be achievable within a reasonable timeframe. In addition, career precarity in the form of fixed term contracts should significantly decline following progression out of post-doctoral roles.

2. RSI education pipeline

Making the first step into a research career can be difficult. Significantly more research-related doctoral candidates are coming out of New Zealand universities than permanent public research roles available. We do not assume a mode of study should offer guaranteed employment to all students, but the risk is that the RSI system is losing access to promising talent, particularly because potential opportunities to pursue research careers outside of academic institutions can be unclear.

We are interested in engaging with the tertiary education system to identify how we can better support the training pipeline for different types of RSI careers. We want to ensure New Zealand is training in the right skills for its research needs, in addition to drawing on valuable international expertise.

5.2 NGĀ WHAKAAROTAU ME TE HUNGA MAHI RANGAHAU PRIORITIES AND THE RESEARCH WORKFORCE

KEY QUESTION 14: How should we include workforce considerations in the design of research Priorities?

We are asking for your feedback on the research workforce issues that we will need to consider when designing the national research Priorities.

Our working model is that the research Priorities will, by default, span multiple organisations and disciplines. We will need to ensure the research workforce has the skills and experience necessary to deliver on the national research Priorities now and into the future. This will require a combination of talented specialists and those who can work well in complex multidisciplinary areas and across organisations and domains.

In particular, we will need to have, attract and grow research leaders who excel at working in multidisciplinary and multi-organisation environments, to draw researchers together to deliver excellent and impactful research. The current RSI system does not support the development of new leaders as well as it could. Some of the system's financial incentives, and global norms around research careers, reward researchers more for publishing papers than for their leadership roles in research programmes or the impact of their work.

We are seeking feedback on how we could design the approach of national research Priorities to better support capability development, attraction and retention, from early to late career researchers. We want to ensure researchers are empowered to collaborate across the RSI system and internationally. We also want to explore incentives to develop research leaders and ensure succession planning is well supported.

3. Movements within the research system

Researchers moving between different types of organisations (eg, shorter term secondments, joint appointments, or changing roles) can be hugely beneficial to career and capability development. Public research institutions could be incentivised in various ways to support such movements.

4. International connections

International connections are critical to an agile, diverse and dynamic research system. Links between New Zealand-based and international researchers and innovators support the exchange of knowledge and allow New Zealand to access knowledge developed elsewhere. These links take time to develop, a process complicated by the uncertainties of the COVID-19 pandemic.

We would like to explore the significant challenges and opportunities for the RSI workforce that should be addressed through the Future Pathways programme. For example, how do we make research careers more flexible, attractive and supportive? What types of action (both from government and on the ground) could be the most effective?

We are also interested in specific considerations for improving career pathways for Māori researchers. In particular, we are interested in the recruitment, management and retention of a Māori workforce, and we want to understand how we might support clearer career pathways for Māori in RSI.



For most if not all research Priority areas, Māori researchers and research teams skilled in Māori engagement will be critical. We need to understand how we can better support capacity and capability development for Māori. We need to look at how we can guard against unfair expectations, and aronga takirua, for Māori researchers to fill the roles of researcher and lead on Te Tiriti considerations, tikanga and Māori engagement.

5.3 NGĀ PŪTEA ME TE HUNGA MAHI RANGAHAU FUNDING AND THE RESEARCH WORKFORCE

5.3.1 He aha te pāpātanga o tētahi tahua tūāpapa ki te hunga mahi rangahau? What impact would a base grant have on the research workforce?

KEY QUESTION 15: What impact would a base grant have on the research workforce?

Provision of a base grant could offer opportunities to address potential problems in the research workforce, including reducing precarity, increasing diversity and providing high-quality career pathways.

The simple provision of a stable grant may let research organisations offer more attractive, flexible and diverse roles and employment conditions than they do at present. It may also allow them to offer more diverse career pathways (such as movement between academia, industry and government). One of our aspirations for the base grant is that increased funding stability could support institutions to put a greater focus on training and developing people and capabilities.

A further opportunity for change could lie in funding conditions or performance expectations tied to a base grant. Any grant offered by government will inevitably have conditions for use and performance expectations of some description that will apply to organisations in receipt of the grant. It may be valuable to set some of these expectations, to reflect our aspirations for a future research workforce.

We are asking for feedback on these ideas. Will a base grant mean improved conditions and opportunities for the research workforce? Should the Government set performance expectations related to the workforce? What considerations would you take into account if choosing whether we should or should not adopt these proposals?

5.3.2 Ngā tikanga tūku pūtea hou New funding mechanisms

KEY QUESTION 16: How do we design new funding mechanisms that strongly focus on workforce outcomes?

We have noted that many overseas research systems have a serious approach to talent development, resourcing, attraction and retention, with a strongly international mindset. Many research systems support early to mid-career researchers, with pathways to establish programmes and teams, and have dedicated schemes for attracting and retaining outstanding researchers to establish research programmes. New Zealand currently has few such schemes, and they are small compared with other aspects of the RSI system.

We are asking for feedback on whether we should seek to adopt more such schemes, and, if so, should we pursue any particular types of scheme. We would like to examine how we should balance funding mechanisms focused on workforce outcomes with other forms of funding like national research priorities.

We are also interested in your views on whether reforms are necessary to MBIE's existing funding mechanisms, to encourage stronger workforce outcomes. Could MBIE's funding applications and decision criteria be improved to support greater contributions by researchers from diverse backgrounds? How might proposals be assessed in a manner that upholds Te Tiriti and will genuinely involve and benefit Māori?



6

TE HANGANGA RANGAHAU RESEARCH INFRASTRUCTURE

6. TE HANGANGA RANGAHAU RESEARCH INFRASTRUCTURE

This chapter discusses future funding, governance and ownership arrangements for national research infrastructure, and how we can maximise our infrastructure investments.

6.1 HE AHA TE RARURARU, ARAWĀTEA RĀNEI E HIAHIA ANA MĀTOU KI TE WHAKATUTUKI? WHAT PROBLEM OR OPPORTUNITY ARE WE TRYING TO ADDRESS?

Research infrastructures, such as laboratories, equipment, and collections and databases are essential inputs into research activities and science services. They are a tool of the trade, enabling researchers and innovators to test, experiment, record, model and explore. Investment in research infrastructure supports high research performance, but New Zealand's investment in national scale infrastructure is small, and lacks sustainable support.

6.1.1 Te korehua o te tuku pūtea, te whakaruruhau me ngā whakaritenga kaipupuri mō ngā hanganga rangahau ā-motu **Ineffective funding, governance and ownership arrangements for national research infrastructures**

New Zealand's national research infrastructures have faced several issues over recent years, including a lack of financial sustainability, delays or an inability to upgrade or support the ongoing operation of the facility, and dissatisfaction and frustrations from research institutions that the research infrastructures are not good value for money and do not provide equality of access.

In addition, *Te Pae Kahurangi* has suggested that while CRIs have been able to invest in important research infrastructures for their researchers, there is an opportunity for increased efficiency through co-location or shared use of infrastructure resources, such as IT systems, to make more efficient use of capital investments.

Underlying these problems are ineffective funding, governance and ownership models that are often quite devolved and decentralised and struggle to balance system, user and institutional needs with priorities as well.

New Zealand's large national research infrastructure mostly relies on joint funding, where government shares the costs with research institutions or, in some cases, users. However, these models are unstable and vulnerable to changing research technology advancement, user requirements or costs, particularly with varying needs across the research system. If research institutions and users do not feel they are receiving fair value relative to the cost of 'membership' they become dissatisfied. At a minimum, this creates tensions in the system, and, if a user leaves, it can create a funding gap for the facility.

We hear dissatisfaction from research institutions about not being able to influence direction. And we see institutions naturally focusing on their institutional priorities over system benefits and sometimes trading off infrastructure investment against other priorities.

6.1.2 Te whakamōrahi i te uara mai i te haumi ki te hanganga rangahau **Maximising the value from investment in research infrastructure**

Problems with funding and other arrangements have resulted in attention that focuses on the sustainability of existing research infrastructure at the expense of maximising the value of future infrastructure as an input to research. Without incentives to invest in research infrastructure, and in a context of limited resources, investment in research infrastructure has not been high priority.

If research infrastructure is a key tool of the trade for researchers, it seems reasonable that better tools will yield better results and more efficient processes. We know New Zealand's investment is small, given its small research system, but it also has relatively small dedicated research infrastructure funds as a proportion of its research spend, compared with other countries. While we know New Zealand has world-class facilities, we have also heard that New Zealand researchers do not always have access to the quality of infrastructure available overseas.

Research infrastructure can also include key data infrastructure. This includes scientific databases, such as those containing weather or environmental data, and invaluable social research data, such as the results of existing cohort studies and the ability to commission new cohort studies. Lack of specific ongoing funding can mean some of this data infrastructure struggles with maintenance over time. Research infrastructure can be highly variable in terms of standardisation, accessibility and interoperability. Improvements in these areas create the potential for greater use of data, and greater social, environmental and economic value to be realised from these valuable resources.

We do not currently have a mechanism to identify where focused investment in research infrastructure would deliver more value for New Zealand. This includes understanding where the potential is to partner internationally, where research infrastructure allows stronger links between research and innovation, or has potential to support knowledge and technology transfer.

We think an opportunity exists to make and leverage infrastructure investments to move New Zealand to a higher performing research sector.



6.2 NGĀ MĀTĀPONO HOAHOA MŌ TE HANGANGA RANGAHAU DESIGN PRINCIPLES FOR RESEARCH INFRASTRUCTURE

6.2.1 Te hanganga rangahau āpōpō Future state for research infrastructure

We believe a case can be made to rethink the funding, ownership and access models for future research infrastructure, and to take a more active strategic approach to managing New Zealand's future portfolio of research equipment and services.

We want a future:

- ▶ where researchers can access the infrastructure they need to operate at the frontier of research; and where access to research infrastructure is enabling and supports excellent, impactful research, increased connections and an efficient research production process.
- ▶ where healthy coordination occurs within research infrastructure, and ownership and funding arrangements effectively balance system objectives, institutional health and user needs.
- ▶ where investment in research infrastructure is planned, ongoing and sustainable, with clear frameworks for reinvestment and disinvestment.
- ▶ where we are effectively leveraging research infrastructure to connect and integrate across the research system nationally and internationally.
- ▶ where we are confident we are using our limited resources well, targeting the right areas for infrastructure investment that deliver value for New Zealand.
- ▶ where smart decisions are made about where to locate and co-locate research infrastructure, to ensure both efficiency and reduce critical redundancy in the system.



6.2.2 Ngā kōwhiringa hoahoa matua mō te tuku pūtea ki te hanganga rangahau Key design choices about research infrastructure funding

KEY QUESTION 17: How do we support sustainable, efficient and enabling investment in research infrastructure?

Three main design choices need to be considered for the future state for research infrastructure funding.

1. When government, rather than research institutions, should assume a role in funding infrastructure

Institutions and research groups are often best placed to decide what type of research infrastructure will support excellent and impactful research. When institutions can fund and manage the infrastructure over time, this works well.

Government has a role in considering the research portfolio as a whole and where investment will deliver benefits to the public and the research system.

But where do we draw the line between what institutions best manage alone and where government should take an interest and invest? This is not simply about the scale of investment, because expensive infrastructure is not always of national interest, and affordable infrastructure can be useful across the system. Understanding the different roles of institutions and government will help us determine whether and how infrastructure funding should be included in a base grant.

Possible factors to consider include:

- ▶ strategic priority and the importance of the research, capability and services that the infrastructure supports or will grow, taking into account the Government's research priorities and core government research functions.
- ▶ the potential value of research infrastructure to support high research performance, including research excellence, high impact, connection and increased productivity.
- ▶ the scale or long-term nature of investment required and whether it is beyond the reach of an individual organisation.
- ▶ the nature of use and whether multiple users could benefit from access, or whether multiple users are required to achieve value from the investment.
- ▶ resilience and sovereignty, including data sovereignty and if the research infrastructure is needed onshore.
- ▶ opportunities to support international cooperation, integration and attraction, including support and use of international research tools, such as foreign research vessels operating in New Zealand.
- ▶ efficiency and the potential to make better use of capital by coordinating and sharing research infrastructure rather than duplicating investment.

We are asking for feedback on which of these factors, if any, we should take into account.

2. How we should decide what infrastructure is important

As we outlined for deciding national research priorities, we also need a process for deciding national research infrastructure priorities that is responsive to system needs and strongly linked to the national priorities and their research strategies. This process would be informed by agreed criteria, and be predictable, transparent and sufficiently flexible to respond to opportunities and emerging priorities.

It would allow for appropriate input from Māori, industry, government agencies and key stakeholders. It would be integrated, strategy led and include analysis, consultation and appropriate expert or executive decision-making.

We are asking for feedback on the type of process that should govern research infrastructure investment.

3. How we should support sustainable, efficient and enabling investment in research infrastructure

Effective models for research infrastructure would appropriately balance system, institution and user needs, and support the sustainable operation of and access to infrastructure. To drive high research performance, we also want to see investment at sufficient scale and targeted to high priority areas.

To create the right model, we need to consider the appropriate funding mechanisms for infrastructure at a national and institutional level and how we create the right incentives to encourage coordination and user responsiveness both with and without government funding. We want to ensure the cost of access is reasonable and services are what users need.

For national level research infrastructure, if we pursue a national infrastructure fund, we need to consider how we would design, operate and maintain this fund, including how we would fund the capability required and how the infrastructure portfolio might be governed and monitored.

Who owns and operates centrally funded research infrastructure is important. We want organisations receiving funding for national infrastructure to be incentivised to encourage coordination and deliver to system and user needs. We need to consider when it would be appropriate for research institutions to own and operate national infrastructure versus a standalone integrated research infrastructure entity, and whether a common ownership model would work across different types of infrastructure.

We are asking for feedback on the future funding, ownership and operational models for research infrastructure.

HE KUPUTAKA GLOSSARY

Multiple frameworks and technical terms are used for describing technological and innovation activities across the research system. The Ministry of Business, Innovation and Employment definitions used in this document are sourced from the *National Statement of Science Investment 2015–2025*, the Draft Research, Science and Innovation Strategy 2019, and definitions used for the R&D Tax Incentive. They may differ from international practice in some circumstances.

Applied research – an original investigation undertaken to acquire new knowledge but that is directed primarily towards a specific practical aim or objective. Findings of applied research can be applied to resolve issues.

Basic research – experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view. This research may develop background context and theories on how to address issues or understand phenomena.

Commercialisation – the commercial use of publicly funded research outcomes by end users, and the arrangements for managing that use.

Excellence – Excellence is the ongoing pursuit of the best thing possible in the context in which research takes place, and can apply to all types of research, including basic, applied, strategic and experimental development. It is well-designed, well-performed, well-reported research, recognised as such through a variety of different ways, including peer review and mātauranga Māori. It is also context specific. Excellence will be assessed differently for different types of research, fields of research and different activities.

Experimental development – Systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, which is directed to producing new products or processes or to improving existing products or processes.

Innovation – Innovation is the process of doing something new. An innovation may be a new or improved product, process or function. Innovation is a process that leads to new or better ways of creating value for society, businesses and individuals. The value of innovation arises from the use and implementation of an idea. The value created may be commercial, social or environmental. Innovation may be unplanned or even accidental, but it does not have to be.

Impact – A change to the economy, society or environment, beyond contribution to knowledge and skills in research organisations.

Knowledge transfer – The transfer of publicly funded research outcomes, such as expertise, learning, technology and skills, by end users, including industry, government, community and Māori.

Mātauranga Māori – The body of knowledge originating from Māori ancestors, including the Māori world view and perspectives, Māori creativity and cultural practices. (Note: this is provided as a general description and not as an authoritative Crown position or definition.)

Research – For the purposes of this green paper, when we refer to ‘research’ as a stand-alone term, we are referring to activities for gathering, organising, generating, understanding or recording knowledge. We intend this definition to be read in its broadest sense, to include science, social research, research into the arts and humanities, and any other activities that may be commonly understood under the term.

Research and development (R&D) – The systematic approach to activity taken with the purpose of creating new knowledge, or new or improved processes, services or goods that has a material purpose of resolving scientific or technological uncertainty.

Science – a particular way of conducting research (‘research’ as defined above as a standalone term). Science resists a strict definition, but can usually be characterised by features such as structured testing of hypotheses, use of data derived from direct observation, and systematic experimentation.

Strategic research – Research activities conducted to support long-term ‘national needs’ and directed into specific broad areas in expectation of useful discoveries or providing the broad knowledge base necessary for solution of recognised practical problems.

Research infrastructure – The facilities, resources and services used by the research, science and innovation community to conduct research, foster innovation and engage at the global frontier of knowledge. It includes working environments, cutting-edge equipment, technologies, vessels, computing systems and communication networks, and collections and databases.

Transformative research – Research that has the capacity to revolutionise existing fields, create new subfields, cause paradigm shifts, support discovery and lead to radically new technologies, such as the opportunities offered by mātauranga Māori methodologies, that consequently generate discoveries that lead to step-changes in our understanding and abilities.

NGĀ WHAKAPOTO ABBREVIATIONS

CRIs	Crown research institutes
GDP	gross domestic product
IP	intellectual property
NSCs	National Science Challenges
MBIE	Ministry of Business, Innovation and Employment
PBRF	Performance-Based Research Fund
R&D	research and development
RSI	research, science and innovation
TEOs	tertiary education organisations

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LSE 7042



16 March 2022

Sent via email to: FuturePathways@mbie.govt.nz

To whom it may concern

Please find following a submission by Te Uru Kahika – Regional and Unitary Councils Aotearoa on the future of New Zealand's Research, Science and Innovation (RSI) system as laid out in the Te Ara Paerangi Future Pathways Green Paper.

The sector looks forward to ongoing dialogue with the Ministry on this very important topic area. As a sector Te Uru Kahika is both a provider and consumer of science and we are deeply committed to the success of any reform.

Please note the contact address for the submission is Dr Chris Daughney, Te Uru Kahika's Chief Science Adviser.

Nāku iti noa, nā

Michael McCartney
CONVENOR
Regional and Unitary Chief Executives' Group
Te Uru Kahika

pp

Executive Policy Adviser



SUBMISSION ON TE ARA PAERANGI FUTURE PATHWAYS GREEN PAPER

Date: 16 March 2022

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Te Uru Kahika welcomes this consultation on the future of New Zealand's Research, Science and Innovation (RSI) system as laid out in the Te Ara Paerangi Future Pathways Green Paper.

Our submission is summarised on the following page, with points covered in more detail in the remainder of this document.

OUR SUBMISSION AT A GLANCE

TE URU KAHIKA – REGIONAL AND UNITARY AUTHORITIES AOTEAROA

- New Zealand's 16 regional and unitary authorities are major producers and end-users of science. We are a key cog in the nation's Research, Science and Innovation (RSI) system.
- In this submission on MBIE's Te Ara Paerangi Future Pathways Green Paper, we acknowledge that parts of our RSI system work well, but some areas need improvement.
- We seek to be involved and contribute to the next stages of the Te Ara Paerangi consultation.

RESEARCH PRIORITIES

- We support development of a set of national research priorities, but agreed underpinning principles must be jointly developed before any priorities are set.
- The relative importance of national research priorities may vary from place to place, so delivery on them will require well-coordinated effort from within and outside the RSI system.

FUNDING

- Increased funding is needed for long-term applied environmental research.
- Mechanisms for environmental and human health research should be better linked.
- Funding is needed for knowledge transfer as well as knowledge creation.
- Funding will deliver greater value for the nation if the RSI system becomes more efficient, open and accountable.

TE TIRITI, MĀTAURANGA MĀORI, AND MĀORI ASPIRATIONS

- We support a shift to a Tiriti-based RSI system, which may look very different to the present and take time to design and implement.
- We support nearer-term modifications to the RSI system to increase engagement of and outcomes for Māori.

INSTITUTIONS

- We recognise the valuable contributions being made by New Zealand's research institutions.
- Where there is a need to improve the performance of research institutes, we encourage consideration of a range of approaches, such as those laid out in this submission.

RESEARCH WORKFORCE

- There are crucial shortcomings in the science graduate cohorts that are coming through New Zealand's education system.
- There is also a critical lack of industry training and professional development opportunities for New Zealand's science workforce.
- We recommend that New Zealand's RSI system should expand its mechanisms and support for the training and professional development of scientists.

INFRASTRUCTURE

- Investment in RSI infrastructure should be planned and sustainable, and access to it should be coordinated and collaborative.
- State-of-the-environment monitoring and reporting are crucial activities that need to be better supported in the RSI system.
- We strongly recommend that the RSI system should support a comprehensive national environmental reporting system, with aligned funding to support the data requirements, standards, process understanding, and time scales associated with this reporting.

INTRODUCTION

Te Uru Kahika welcomes this consultation on the future of New Zealand's Research, Science and Innovation (RSI) system as laid out in the Te Ara Paerangi Future Pathways Green Paper.

TE URU KAHIKA IS THE NEWLY ESTABLISHED IDENTITY FOR THE COLLECTIVE EFFORTS OF NEW ZEALAND'S REGIONAL SECTOR

The 16 regional councils and unitary authorities comprising the regional sector have responsibilities for integrated management of land, air and water resources, supporting biodiversity and biosecurity, providing for regional transport services, and building more resilient communities in the face of climate change and natural hazards. The name Te Uru Kahika reflects the work and vision of the regional sector: *thriving environments and thriving communities*.

- **The regional sector is a major producer of science within the wider RSI system.**

The 16 regional authorities have combined science expenditure of over \$70 million every year¹ and collectively employ hundreds of scientists, including dozens of PhDs. Science undertaken by the regional sector delivers detailed, local-scale knowledge of the catchments that they work in and generates much of New Zealand's vital state-of-the-environment monitoring data². For decades, the regional sector's network of science Special Interest Groups (SIGs)³ has facilitated collaboration and leverage of research investments across the country. As a crucial cog in New Zealand's RSI system, regional authorities have expertise in working at the science-policy interface, and determining how best to implement research to deliver environmental and community outcomes.

- **The regional sector is also a key collaborator, integrator and user of science produced by other parts of New Zealand's RSI system.**

Regional sector scientists play an integrating role and collaborate extensively on research programmes led by Crown Research Institutes (CRIs), Independent Research Organisations (IROs) and universities. The regional sector also commissions such organisations to undertake research and consultancy projects on a wide range of topics. The regional sector provides guidance on research needs to the wider RSI system through its overarching science strategy⁴ and SIG science strategies⁵.

¹ <https://www.pce.parliament.nz/publications/environmental-research-funding-review>, see page 33.

² For example, see Land Air Water Aotearoa, www.lawa.org.nz and regional authorities' environmental reports

³ <https://www.envirolink.govt.nz/assets/Reg-SIG-Network-Structure-Chart-May-2021.pdf>

⁴ <https://www.envirolink.govt.nz/assets/Research-for-Resource-Management-2020.pdf>

⁵ See <https://www.envirolink.govt.nz/research-strategy/>

NEW ZEALAND'S CURRENT RSI SYSTEM

As we describe below, some parts of the current RSI system work well but there are areas that need improvement. Appropriate changes in the RSI system could make a big difference to the effectiveness of science funding. However, changes must be implemented carefully to avoid unhelpful disruptions to the RSI system.

SOME PARTS OF OUR RSI SYSTEM ARE WORKING WELL

- **New Zealand's RSI system is producing some excellent science in areas of importance to the nation.**

These include understanding climate change, freshwater and marine resources, and biodiversity and biosecurity, and also investigating approaches that can be taken to mitigate and adapt to the impacts of key issues on our environments and communities. Much of the environmental science produced by our RSI system is internationally top-notch, while also being produced cost-effectively (e.g. as shown by a high number of publications produced per dollar invested).

- **New Zealand's RSI system also supports some good collaborations that contribute significantly to its overall performance.**

Key for Te Uru Kahika are the collaborations between regional sector scientists and the wider RSI system, as have in certain instances been fostered through stable, long-term funding mechanisms such as the National Science Challenges (NSCs) or the Strategic Science Investment Funding (SSIF) received by CRIs and IROs.

- **Emphasis on building relationships between scientists and science end-users is a strength in some parts of New Zealand's RSI system.**

As noted above, the regional sector undertakes a dual role as a producer and a user of science. For both roles, the collaborations between end-users across the country and scientists across the RSI system are absolutely vital for efficient uptake and application of research. The Envirolink programme (\$1.6m per year) has been a key success that has enabled the regional sector to rapidly and cost-effectively take up and apply science knowledge produced elsewhere in the RSI system. Inclusion of pathways to implementation in the Endeavour Fund is also seen as valuable.

- **Emphasis on mātauranga and Te Ao Māori is a growing strength of New Zealand's RSI system.**

Te Uru Kahika recognises these as complementary knowledge systems which can and do contribute significantly to outcome benefits for the nation. Strong engagement of mana whenua within the RSI system is vital; Māori involvement in co-leadership of NSCs is an example of how such relationships can work well.



SOME PARTS OF OUR RSI SYSTEM NEED IMPROVEMENT

The Regional Sector's Resource Managers Group (RMG) conducted a review of New Zealand's RSI system in 2019 in response to discussion that it was not serving regional authorities as well as it used to. The consensus from those interviewed for the review is summarised below and expanded upon in the following sections of this submission.

- **New Zealand's RSI system is not delivering on some national needs.**

While the current RSI system is delivering some excellent research, more focus on applied environmental science is urgently needed to address many of the challenges we presently face as a nation. Of particular importance, science policy and the allocation of funding to environmental and natural hazards science areas is not consistent enough under the present RSI system to allow for the required robust and long-term science. As a case in point, New Zealand's state-of-the-environment monitoring datasets are a national taonga but are highly under-resourced at present (covered in more detail later).

- **Collaborations are sometimes impacted by unhelpful competition.**

Despite existence of some successful collaborations, the lack of full funding for many institutions requires them to compete for a significant part of their total revenue. While competition does have some benefits, it has also led to unhelpful convergence of business models and overlap of operating areas for some of New Zealand's research institutions.

- **Complexity, constant change and insufficient resourcing impede RSI system engagement with Māori and some end-users**

For such a small country, our RSI system includes a plethora of funding mechanisms that are introduced, altered or removed frequently. These include SSIF, NSCs, the Endeavour Fund and several smaller schemes such as the Vision Mātauranga Capability Fund (VMCF), as well as former mechanisms such as Outcome-Based Investments.

Acknowledging that there are some good connections with end-users, the complexity and constant change of the RSI system are barriers for end-users of government-funded environmental and natural hazards research, such as regional authorities, to fully understand the system and to respond to signals and changes as quickly as needed.

Resourcing for Māori to engage with and within the RSI system is particularly lacking. As highlighted in the Future Pathways Green Paper, and other documents, the inclusion of mātauranga Māori and Te Ao Māori is important and requires much greater emphasis and effort to embed across the whole RSI system.

CHANGES TO OUR RSI SYSTEM MUST BE ENACTED CAREFULLY

RSI system reform could be disruptive. Care needs to be taken to maintain a well-functioning RSI system that will continue to support New Zealand to respond to and recover from Covid-19, while



simultaneously dealing with a range of complex environmental challenges such as climate change and biodiversity loss. Thus, where appropriate, we recommend that any changes made to the RSI system should be synergistic with other relevant legislative or organisational reforms presently proposed or underway, such as the replacement of the Resource Management Act (RMA), the review into the future for Local Government, or improvements to New Zealand's Environmental Reporting System and the proposed NPS for Indigenous Biodiversity. Of key importance for Te Uru Kahika is that the RSI system must continue to produce rigorous science to support policy-making and environmental management.

OUR FEEDBACK ON THE FUTURE PATHWAYS GREEN PAPER

In the following sections we provide our feedback to the themes in the main sections of the Te Ara Paerangi Future Pathways Green Paper.

RESEARCH PRIORITIES

- **Te Uru Kahika is very supportive of proposals to develop a consistent set of national research priorities.**

As mentioned above, there is some excellent environmental research being conducted in New Zealand but, in general, current RSI funding mechanisms do not provide sufficient clarity on national or regional priorities, nor sufficient incentive for researchers to focus on them. In the immediate term, identification of regional and national research needs could draw heavily on existing science strategies, such as those developed by the regional authorities⁶, and the Department of Conservation and the Ministry for the Environment⁷. We emphasise that the provision of research through the national priorities must be coordinated and timed to line up with New Zealand's policy-making and planning needs.

- **Agreed principles must be jointly developed before national research priorities are set.**

Principles for the development of national research priorities should include co-development with Māori to give effect to Te Tiriti, with processes in place to enable this. Central government, local government, scientists and other partners should also be involved in developing the set of principles and processes by which the priorities are to be determined. For example, the research priorities should reflect the strategic needs of New Zealand, both in the medium and longer-terms, and it is anticipated that these will change with time in response to both changing national and international pressures and opportunities – so how often the national priorities are to be updated, by who, and what support is given to scientists and institutes that may need to shift their areas of research, will all need to be worked through. Te Uru Kahika recognises that the Future Pathways

⁶ <https://www.envirolink.govt.nz/research-strategy/>

⁷ <https://environment.govt.nz/facts-and-science/science-and-data/conservation-and-environment-science-roadmap/>

consultation is just the start of such a process, and we look forward to further involvement.

- **Delivery on national research priorities will require well-coordinated effort from within and outside the RSI system.**

The NSCs are New Zealand's most recent collection of mission-led programmes, but they were not sufficiently coordinated with the rest of the RSI system and as a result have struggled to engage with or influence the direction of aligned non-NSC research, such as that funded by SSIF or government departments or regional authorities. We note that delivery on national research priorities may also require contributions from outside the traditional RSI system, such as the health sector. Moreover, it is likely that there will be some interlinkages between the various national research priorities, so coordination will be required to avoid unhelpful siloism or duplication. The relative importance of the national research priorities may vary from place to place, so coordinating with mana whenua, communities, and regional/local organisations will be vital. These details all highlight the need for RSI settings that enable better system-wide coordination in the future.

TE TIRITI, MĀTAURANGA MĀORI, AND MĀORI ASPIRATIONS

- **Te Uru Kahika supports a shift to a Tiriti-based RSI system.**

Regional authorities are already partnering with Māori to deliver better outcomes for Māori and all New Zealanders. We acknowledge the importance of tikanga and worldviews of Te Ao Māori. We recognise the distinctness and value of mātauranga as a knowledge system. We strongly support an enhanced RSI system that funds iwi/Māori priorities and builds capability and capacity among Māori researchers. We note that positive improvements in the RSI system are already being made in these regards.

- **A Tiriti-based RSI system may look very different to the present and take time to design and implement.**

Giving meaningful effect to Te Tiriti o Waitangi may require markedly different governance arrangements, priority-setting approaches, investment mechanisms, reporting and evaluative frameworks, and/or intellectual property⁸ considerations compared to today's RSI system. Te Uru Kahika would welcome the opportunity for input, and we encourage allowance of adequate time and resourcing for these and other RSI system design decisions to be appropriately worked through by Māori and the Crown.

⁸ This includes sovereignty of mātauranga-a-iwi/hapū, Māori knowledge and data, which are issues of recognised importance presently being considered by a range of organisations and initiatives. For example, see the Mana Ōrite Work Programme developed between Statistics New Zealand and the Data Iwi Leaders Group of the National Iwi Chairs Forum.

- **We support nearer-term modifications to the RSI system to support increased engagement of Māori, providing such changes do not impede the overall shift to a fully Tiriti-enabled system.**

We recommend increased funding for research that is Māori-led and/or that facilitates Māori connections with the RSI system. The VMCF has provided a good start, but its budget is relatively small and limited in scope for what can be funded. We suggest that a new fund for medium-sized projects and/or emerging Māori researchers could be established to support the on-going development of mātauranga and bridge the gap between VMCF projects and the significantly larger programmes funded by mechanisms such as Marsden or Endeavour.

In principle we support the concept of regionally-based knowledge hubs as described in the Future Pathways Green Paper. Some such entities already exist and have established working relationships with regional authorities. Successful extension of this concept would depend on close involvement of Māori in their design and operation, which may require extensive consultation.

FUNDING

- **Increased long-term funding is needed for applied environmental research.**

New Zealand is facing a range of increasingly urgent and complex environmental issues, including natural hazards and biodiversity protection. Finding appropriate responses to these issues requires long-term applied research, which in turn requires stable, long-term funding. But funding for such research has become much more difficult to secure⁹ because MBIE's assessment of research proposals places emphasis on science novelty before impact benefits for New Zealand. We strongly recommend a rebalancing to provide more funding for applied environmental research, including long-term monitoring programmes, and assessing research proposals foremost on their potential to create outcome benefits for the nation.

- **Mechanisms for environmental and human health research should be better linked.**

The Health Research Fund (HRF) is of substantial relevance to the regional sector because there are many aspects of human health research that are directly linked to the environment (e.g., drinking and recreational water quality, air quality, emerging contaminants of concern, etc.). To date the HRF has been difficult to access and largely isolated from mechanisms for environmental research such as SSIF and the Endeavour Fund. New Zealand science and society would benefit from improved linkages between these funding mechanisms. The regional sector has had some positive discussion with the Health Research Council about a potential research partnership and will continue these discussions in the near term.

⁹ As just one example, the regional sector has struggled for more than a decade to secure funding to develop national microbiological water quality guidelines for coastal areas.

- **Funding is needed for knowledge transfer as well as knowledge creation.**

As in other countries, New Zealand's RSI system incentivises the creation of *information*, which scientists disseminate through publications, reports, presentations, etc. We recognise the value of such outputs as adding to the global body of scientific knowledge. However, creating benefits from such scientific outputs requires *knowledge transfer*, whereby key components from the total pool of accumulated scientific knowledge are vetted, interpreted, combined, and packaged for facilitated uptake by end-users to address their own specific needs.

We recommend increased emphasis, funding and accountability for knowledge transfer across New Zealand's RSI system. Envirolink has been a very useful mechanism for transferring environmental research knowledge to the regional sector. Until early 2018 it was also a useful mechanism to transfer natural hazards research knowledge, when MBIE had a change in policy (or interpretation of policy). Increasing the funding for Envirolink, and establishing new funds like it (e.g. HazardLink, IwiLink) would provide a straight-forward way to extract useful knowledge from across the RSI system and make it readily available to end-users. Increasing the funding to support science knowledge transfer to the public would also be helpful.

- **Funding will deliver greater value for the nation if the RSI system becomes more efficient, open and accountable, with better systems for performance evaluation.**

As much as possible, we recommend that science funding should be spent on conducting science. But in the current RSI system, competitive bidding between CRIs and other organisations consumes a great deal of resources, and the time spent is often considered unproductive because there is a relatively low success rate for research proposals. Many parts of the RSI system are also highly bureaucratic and heavily governed (the NSCs are a case in point), creating further inefficiencies. In some cases, research outputs are not open access, whereas it is our view that publicly-funded science and research should be freely and publicly available.

We also recommend that the RSI system should develop a more effective and efficient system for evaluating the benefits from its investments, not only as a means of demonstrating the value of science for the nation but also as a means of holding research institutions to account for the funding they receive. At present, writing annual reports to MBIE is a time-consuming activity for many organisations, but it is not clear that these reports provide useful information to evaluate the RSI system's performance. The regional sector is a key end-user of research and could provide useful feedback to government on the impact of funded research, and we would welcome an opportunity to develop this idea further.

- **The regional sector seeks greater influence on RSI funding decisions.**

Funding mechanisms provide a key lever for adjusting incentives and improving performance of New Zealand's RSI system which, as recognised in the Te Pae Kahurangi report, "is fragmented and supports unproductive competition while struggling



to adapt to changing national needs". Critically, regional authorities are key users of environmental and natural hazards research and would like to have more influence on science funding and policy decisions, particularly in relation to the Endeavour Fund, SSIF and knowledge-management transfer schemes such as Envirolink.

INSTITUTIONS

- **Te Uru Kahika recognises the valuable contributions being made by New Zealand's research institutions.**

We consider that many of New Zealand's research institutions are already performing well. Moving forward, we agree that New Zealand's research institutions must serve the current and future needs of the nation, and that organisational agility, resilience and efficiency are among the characteristics they require to do so.

However, regional authorities find that it is difficult to influence and access the science from some institutions at some times. This situation typically arises when institutional incentives drive scientists to publish, but not necessarily to transfer their knowledge to the likes of regional authorities or other potential end-users.

- **Where there is a need to improve the performance of research institutes, we encourage consideration of a range of approaches.**

Improvements to the performance of New Zealand's research institutions could be delivered through adoption of shared overhead functions, even if the institutions themselves are not physically merged. Examples include cost-shared laboratories, equipment, libraries, human resource systems, data/IT systems, governance entities and so forth. Co-location has been previously used with some success to drive greater collaboration among research institutions, e.g. the Lincoln Hub, but delivers best value if all other necessary RSI system settings facilitate cross-institutional collaboration.

The provision of more stable, long-term funding would likely improve the performance of certain research institutes, even if no other changes are made to RSI system settings. This is because the provision of more stable, long-term funding would decrease the fraction of their operating costs that many of our research institutions need to obtain every year through contestable processes. In turn this would reduce the current level of competition and duplication of expertise between some of New Zealand's research institutions. As noted above, applied environmental science is an area that needs more funding for the benefit of NZ Inc. We stress that in whatever topic areas it is applied, clear performance expectations would need to be laid out for any long-term funding to ensure that it is focused on the right priorities and used efficiently. We also consider that there are benefits to retaining some level of competition within the RSI system, for example for ensuring that the best science is being funded.

With respect to CRIs in particular, performance improvements could likely be achieved through some of the levers already at MBIE's disposal. For example, the respective areas of focus of the CRIs could be clarified and given greater separation by making



adjustments to their Statements of Core Purpose. Greater direction into their work plans could be achieved by more prescription in their annual Statements of Corporate Intent and the performance metrics defined therein. More control on their science focus and operations could be obtained by greater direction of their SSIF contracts. Performance monitoring systems could be improved to provide greater tracking of the metrics that matter, such as delivery of impact benefits for the nation. However, nudging any of these levers would be most effective if done in line with a national list of research priorities.

We caution that changing any single setting in the RSI system will not necessarily improve the performance of New Zealand's research institutions. This is because the performance of any research institute is affected by several interrelated factors, such as governance arrangements, management approaches, business context or organisational size, mandate, structure and operating model. A change in governance arrangements may not enhance performance if the research institute's operating model is poor; likewise, changing a research institute's operating model may not enhance performance if other system settings are not conducive. Therefore, before altering any RSI system settings, care must be taken to develop a full, evidence-based understanding of the relationships and feedbacks between the many factors that can influence the performance of research institutions.

RESEARCH WORKFORCE

- **There are crucial shortcomings in the science graduate cohorts that are coming through New Zealand's education system.**

There is a critical lack of graduates with cultural competency and the ability to work across science and mātauranga as complementary knowledge systems.

Within the science disciplines, New Zealand's tertiary education system isn't producing enough graduates in certain areas, such as hydrology, hydrogeology, soil science, biosecurity and geomorphology, to name a few.

As often as not, the science graduates coming from New Zealand's tertiary education system don't have the full spectrum of practical skills needed in today's workplaces, such as experience in real-world work environments, understanding of legislation, policy-making and planning, the machinery of government, project budgeting and management, or stakeholder relationship management (see below for options to address this issue).

These above-listed shortcomings are being felt acutely by the regional authorities, central government and industry, as well as by other parts of the RSI system such as CRIs.

- **There is also a critical lack of industry training and professional development opportunities for New Zealand's science workforce.**

Increasingly, professional scientists need to be able to work across disciplines in order to address the environmental and social challenges facing New Zealand, yet there are few opportunities for professional development to broaden the relatively narrow expertise gained in a university degree.



Upskilling in Te Ao Māori is urgently needed, not just in terms of increasing the engagement of Māori with and within the RSI system as described above, but also to increase the cultural competency of scientists who do not presently have this background. We emphasise that any such Te Ao Māori professional development initiative would need to be effectively resourced, coordinated and delivered with culturally appropriate methodologies.

Science management, i.e. leadership of science teams and projects, is also a special skill for which there are few professional development opportunities for working scientists or others interested in becoming science managers.

These limitations in professional development mean that New Zealand's RSI system is not always getting the best benefit of its own human resources. This creates unnecessary challenges to recruit new scientists instead of simply upskilling the existing workforce.

- **We recommend that New Zealand's RSI system should expand its mechanisms and support for the training and professional development of scientists.**

One approach for achieving this would be to establish a more structured, formalised system of cooperative education, whereby the traditional university experience is complemented by a number of paid work internships in science organisations¹⁰. The first cooperative education programmes commenced over 100 years ago and are now offered by many universities and colleges in North America, Europe and Australia, but no such programme presently exists in New Zealand (though some science internships are available¹¹).

Formalised and sufficiently resourced professional development mechanisms should also be introduced into New Zealand's RSI system. Secondments and staff exchanges of scientists between regional authorities, CRIs, government departments, universities, etc. provide an opportunity for mutual benefit and upskilling. A centrally funded scheme could facilitate such exchanges, for example by salary cover for backfilling staff who have temporarily left one organisation to work at another.

Regional authorities are well placed to support initiatives such as those listed above, either as host organisations for professional secondees or cooperative education placements, or by providing science staff to participate in such schemes.

INFRASTRUCTURE

- **Investment in RSI infrastructure should be planned and sustainable, and access to it should be coordinated and collaborative.**

We agree that researchers should be able to access the infrastructure they need. We support a principle of “appropriate” infrastructure and suggest that using the latest

¹⁰ The Canadian Association for Co-operative Education describes operating principles for such programmes.

¹¹ For example: <https://www.internnzoz.com/internships.html>, <https://niwa.co.nz/internships>, <https://careers.aucklandcouncil.govt.nz/go/Grads%2C-interns-and-cadets/2923901/>

technology to operate at the “frontiers of research” as suggested in the Future Pathways Green Paper may not always be necessary, or could be served by accessing infrastructure through national and international collaborations.

- **State-of-the-environment monitoring and reporting are crucial activities that need to be better supported in the RSI system.**

As highlighted in Environment Canterbury’s submission, the RSI system has a crucial role in informing the framework for state-of-the-environment reporting. This framework is premised on human-environment interactions and provides clarity for central and local government as to the science and research needs (and data and evidenced-based information required) to report on and inform New Zealand’s sustainable development, and to evaluate the effectiveness of our policies and plans to achieve this.

Further work is needed to ensure that central government’s state-of-the-environment reporting programme and framework connects to the RSI system. This issue cannot be fully addressed exclusively by the proposed reforms to the Environmental Reporting Act¹². Improvements are also needed in the RSI system to give greater support to timely provision of methods and approaches for monitoring and reporting to ensure New Zealand has the tools to monitor and report on the environment across all domains – in an ecologically meaningful and standardised way, over time and differing spatial scales.

A nationally coordinated environmental monitoring and reporting system, together with prioritising and adequately funding research to address data and process understanding gaps, is critical to detecting, attributing, projecting, and managing environmental change. We strongly suggest that any design of research priorities supports a comprehensive national environmental reporting system, with aligned funding to support the data requirements, standards, process understanding, and time scales associated with this reporting. The regional sector is a critical contributor to this development and delivery and needs to be front and centre of any such system.

In addition, central coordination and funding of the substantive datasets that are currently held regionally (e.g., by regional authorities and research institutions) but have national significance would enhance their utility, both nationally and internationally, now and for future generations. Here we include examples such as national soil mapping (SMAP), the Land Cover Database (LCDB), national LiDAR and climate datasets, all of which should be fully funded and not have to compete in the Endeavour Fund for project funding. Ensuring discoverability, accessibility, and interoperability of data is critical to ensure that central and local government investment in research and monitoring delivers best value and evidence to inform decision-making.

This ends our submission.

¹² <https://environment.govt.nz/publications/improving-aotearoa-new-zealands-environmental-reporting-system/>



Date 26 April 2022

Subject: **State of Environment 2022 report**

Approved by: A J Matthews, Director - Environment Quality
S J Ruru, Chief Executive

Document: 3037371

Purpose

1. The purpose of this memorandum is to advise the Committee of the up-coming launch of the State of Environment 2022 report.

Executive summary

2. Natural resource management is a core function of Taranaki Regional Council, as set out in legislation, our strategic direction, policies and community outcomes. One of these requirements is to monitor and report on the state of the environment.
3. The last State of Environment (SoE) report was published in 2015. The State of Environment 2022 report builds on previous reporting, setting the scene with a general overview of the region before updating readers with the latest science and research information for three key topics: air, land and water.
4. Public release of the State of Environment 2022 report is scheduled for 28 June 2022 via the Ordinary Council meeting. It would be of value to familiarise elected members with report content prior to public release. As such, a workshop with Councillors and Committee members is proposed following the Policy and Planning meeting on 7 June 2022.

Recommendations

That the Taranaki Regional Council:

- a) receives this memorandum and endorses the proposed workshop with Councillors and Committee members on 7 June 2022
- b) notes the up-coming public release of the State of Environment 2022 report via the 28 June 2022 Ordinary Council meeting.

Background

5. State of Environment reporting is a component of environmental monitoring and reporting outputs delivered in accordance with our legislative requirements to monitor and report on the state of the environment.
6. The last SoE report was published in 2015. The State of Environment 2022 report builds on previous reporting, updating readers with the latest science and research information around the climate, air quality, productive land, contaminated land, solid waste, biodiversity and biosecurity, and our freshwater and coastal marine environments. This report also introduces a range of new information around climate change.

Discussion

7. It is anticipated that the broad summary provided by the State of Environment 2022 report, and further detail available in the supporting technical reports, will provide the foundation for pending policy and planning processes, and inform discussions with communities through processes such as the development of our revised Regional Policy Statement (RPS) and Natural Resources Plan (NRP). It is also anticipated that this information can be utilised to inform the prioritisation of Council activities such as land and freshwater management through improved targeting of interventions and actions.
8. To complement the State of Environment 2022 report, officers are also working on a series of online catchment summaries. The aim of these is to provide our community with key information about the region's natural environment within each of the proposed Freshwater Management Units (FMU), the scale at which we will be required to undertake reporting to Government on progress against identified freshwater limits and action plans to maintain and/or improve freshwater outcomes. Our hope is that this format will provide the community with more timely information around the state of the region's natural resources, and to continue to improve public access to the most recent data and information.
9. Throughout 2021-22 staff have been undertaking further data analysis, and compiled information and case studies from around the region. This report is now in the final drafting and design stages, with the final report expected to be published in mid-June 2022. It would be of value to familiarise Council and Committee members with the report content prior to public release. As such, a workshop is proposed following the Policy and Planning meeting on 7 June 2022.
10. Public release of the State of Environment 2022 report is scheduled for 28 June 2022 via the Ordinary Council Meeting.

Financial considerations—LTP/Annual Plan

11. This memorandum and the associated recommendations are consistent with the Council's adopted Long-Term Plan and estimates. Any financial information included in this memorandum has been prepared in accordance with generally accepted accounting practice.

Policy considerations

12. This memorandum and the associated recommendations are consistent with the policy documents and positions adopted by this Council under various legislative frameworks including, but not restricted to, the *Local Government Act 2002*, the *Resource Management Act 1991* and the *Local Government Official Information and Meetings Act 1987*.

Iwi considerations

13. This memorandum and the associated recommendations are consistent with the Council's policy for the development of Māori capacity to contribute to decision-making processes (schedule 10 of the *Local Government Act 2002*) as outlined in the adopted long-term plan and/or annual plan. Similarly, iwi involvement in adopted work programmes has been recognised in the preparation of this memorandum.

Community considerations

14. This memorandum and the associated recommendations have considered the views of the community, interested and affected parties and those views have been recognised in the preparation of this memorandum.
15. It is anticipated that the report will provide information on the current state and trends in a range of environmental indicators to inform discussion with iwi/hapū and the community as part of Council's Essential Freshwater implementation programme.

Legal considerations

16. This memorandum and the associated recommendations comply with the appropriate statutory requirements imposed upon the Council.



Date 26 April 2022

Subject: **Responsibilities for kaimoana management and cultural practices**

Approved by: A D McLay, Director - Resource Management
S J Ruru, Chief Executive

Document: 3021992

Purpose

1. The purpose of this memorandum is to outline which agencies manage kaimoana, the current state of the resource, and options for improved management.
2. This item arises from Members' interest at the last committee meeting.

Executive summary

3. Hapū and kaitiaki of Ngāruahine and Taranaki Iwi have established rāhui along part of the western Taranaki coastline and will present to the Committee about their concerns.
4. Rāhui in this instance is a traditional cultural practice to restrict or prohibit an activity or access to an area in order to protect, preserve and allow for the recovery of a resource.
5. Increased pressure has occurred from people learning about kaimoana resources on social media and coming to the region to gather pāua and other kaimoana shellfish stocks. Hapū have placed rāhui on the affected reef areas because of the serious concerns they have, on the long-term sustainability of the pāua and the other kaimoana shellfish stocks.
6. With support from Ngāruahine and Taranaki Iwi, discussions between the hapū and Ministry for Primary Industries (MPI) officials have sought support from the Minister for the rāhui, by way of a temporary closure under section 186A of the *Fisheries Act 1996*. Under this legislation MPI have the primary responsibility for kaimoana management and work closely with tangata whenua.
7. Taranaki Regional Council ('TRC' or the 'Council') regulatory oversight of the coastal marine area (CMA) is through the Regional Coastal Plan. The Plan has jurisdiction out to the twelve nautical mile limit, and takes into account the impacts of activities in this area. Monitoring of those effects and surveys such as the State of the Environment monitoring of the rocky shore assist the Council to keep track of what is occurring in the coastal marine area. The Courts have determined that Councils can have objectives, policies and rules to protect indigenous biodiversity (including kaimoana); however,

there is no clear business case for pursuing this approach at this time noting that the Council cannot impinge on MPI Fisheries Act responsibilities.

Recommendations

That the Taranaki Regional Council:

- a) receives this memo entitled *Responsibilities for kaimoana management and cultural practices*
- b) notes the rāhui by the hapū to protect, preserve and allow for the kaimoana resource to recover
- c) notes the Fisheries Act is the most appropriate statute to apply to kaimoana management
- d) notes that once an application is made for a temporary closure, under the Fisheries Act, the Council will consider making a submission;
- e) determines that this decision be recognised as not significant in terms of section 76 of the *Local Government Act 2002*
- f) determines that it has complied with the decision-making provisions of the *Local Government Act 2002* to the extent necessary in relation to this decision; and in accordance with section 79 of the Act, determines that it does not require further information, further assessment of options or further analysis of costs and benefits, or advantages and disadvantages prior to making a decision on this matter.

Background

8. Jack Davey, Kaitiaki for Nga hapū o Orimupiko Marae, Fran Davey and Mahara Okeroa will address the Committee on the state of kaimoana and actions to protect it.
9. As a result of the increased pressure by people gathering pāua and other kaimoana shellfish stocks, the hapū have placed rāhui on the affected reef areas because of the serious concerns they have, on the long-term sustainability of the pāua and the other kaimoana shellfish stocks. The increased pressure is thought to arise from interest generated on social media.
10. Rāhui in this instance is a traditional practice to restrict or prohibit an activity or access to an area in order to protect, preserve and allow for the recovery of a resource.
11. Ngāti Haua, a hapū of Ngāruahine, placed a rāhui in their coastal rohe on all species and access in July 2021. This rāhui remains in place.
12. In January this year kaumātua of the hapū of Ngāruahine placed a rāhui prohibiting the harvesting of species such as pāua along the coastline from the Taungatara Stream to the Waihi Stream.
13. On 9 January, at a public meeting at the Oaonui hall, and on behalf of Nga hapū o Orimupiko Marae, it was unanimously agreed to place a rāhui from Waiwiri Bay (just south of the Oaonui Production Station) to the Rāhuitoetoe Stream (approximately 5km south of Opunake). The rāhui is in place until 31 July 2022.
14. With support from Ngāruahine and Taranaki Iwi, discussions between the hapū and Ministry for Primary Industries (MPI) officials have commenced seeking support from the Minister for the rāhui, by way of a temporary closure under section 186A of the *Fisheries Act 1996*.

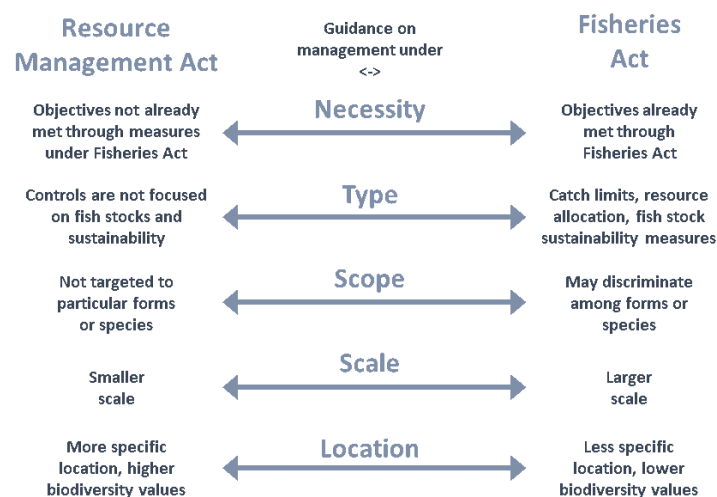
Kaimoana Management

15. Under the Fisheries Act, MPI are responsible for managing kaimoana and have regulations in place that are monitored by fisheries officers.
16. A zoom meeting was held with ministry officials, on 13 April, and the following was noted:
 - a) compliance monitoring in the region is extremely challenging given the multiple access points to the coast
 - b) the public have very high service delivery expectations and the fisheries section has tight Government budgets
 - c) storms and associated high sand movement periods have significant negative effects on kaimoana
 - d) regulatory performance in the last 2 years has been greatly impacted by covid-19 lockdowns
 - e) there are three fisheries officers (an increase from two several years ago); four honorary (voluntary) officers, about to increase to nine; monitoring programmes that involve bringing an extra five fisheries officers (forming four, two person teams) during the extreme low tides and working with the Police and Department of Conservation staff; fisheries officers also undertake monitoring under other low tides; enforcement action being undertaken involving giving warnings, issuing infringement fines (\$250-\$500), and prosecutions; also able to seize vehicles of those in serious non-compliance; in the last 6 months there were approximately 650 inspections and seventy-one (71) offences identified resulting in thirty-seven (37) warnings, thirty (30) infringement notices and four (4) prosecutions
 - f) some monitoring of kaimoana stocks in the region over the years
 - g) since the rāhui there has been less kaimoana gathering and pressure on the resource
 - h) self-policing regimes, involving tangata whenua and the community, have proven to be successful elsewhere in NZ
 - i) two year temporary closure mechanisms, reside in the Fisheries legislation, and allow a resource to recover and can be extended. The Minister of Fisheries makes the decision
 - j) fisheries officers wanted to positively work with the Council and others to protect kaimoana resources.
17. The Taranaki Regional Council has environmental responsibilities for the coastal marine area (CMA) through the Regional Coastal Plan prepared under the *Resource Management Act 1991*. The Plan has jurisdiction out to the twelve nautical mile sea limit and has objectives, policies and rules for activities such as discharges, disturbance, deposition, structures and extractions.

Motiti decision

18. The Motiti decision refers to a recent ruling by the Court of Appeal on Bay of Plenty's review of their coastal plan. The Court of Appeal has determined that councils can have objectives, policies and rules to manage the taking of indigenous biodiversity (including kaimoana). The counter argument was that fishery management was solely the responsibility of the Ministry of Primary Industries.

19. Key to the Court's decision is that the Fisheries Act is concerned with sustainable utilisation of fisheries resources (and only to the extent appropriate to secure future stocks does it require decision makers to protect the aquatic environment) while the Resource Management Act (RMA) is concerned with protecting indigenous biodiversity, which has a much broader application. The Courts have determined that regional councils can control fishing and fisheries resources in the exercise of its section 30 functions.
20. The Court of Appeal outlined five indicators to provide guidance when considering whether a control could be implemented under the RMA in a way that does not act for fisheries management purposes.



21. For Bay of Plenty, the ruling has resulted in the identification of three protection areas surrounding reef systems around Motiti Island with new rules prohibiting the taking of all plants and animals (including fish and shellfish). The outcome has been controversial with some tangata whenua saying that their views were not represented in the process or decision.
22. The effect of this ruling is still being grappled with by regional councils who, until now, had seen fishery management as 'out of scope'. While this approach could technically be pursued, there are many implications.
23. First, is there a business case for Taranaki? Council would need to review the five indicators above to determine whether there was a need to manage the resource under the RMA (rather than Fisheries Act). Only then would Council consider a plan change to the Proposed Coastal Plan under the RMA (which is still proceeding with Environment Court Appeals). The results of any Plan change would be uncertain, costly and potentially out of step with what might be sought by iwi.
24. In addition, to pursue this approach would ultimately take decision-making and self-determination out of the hands of iwi for whom there is an appropriate process already in place under section 186A of the Fisheries Act. This could potentially impinge upon their role and right to act as kaitiaki.
25. Previously tangata whenua have approached the Council about concerns about kaimoana depletion and the Council has advocated for measures to protection resources, including increasing compliance monitoring capacity and increasing penalties for non-compliance.

Discussion

26. The media coverage and the results of engagement with tangata whenua, show the overfishing effects on the kaimoana shellfish stocks to a point where kaitiaki and kaumātua have had to place rāhui in order to protect and allow the recovery of these taonga for future generations. However, recognition and the understanding of rāhui across the wider community has not always been supported which has caused some tension. To ease that situation and gather wider support, hapū have printed and are distributing pamphlets and notices of the rāhui and contact details for those who wish to know more.
27. The implementation of a Fisheries Act section 186A temporary closure for up to two years would give statutory support for the rāhui. This process involves a formal iwi request, an opportunity for public submissions, and a decision by the Minister of Fisheries. The temporary closure is essentially monitored by fisheries officers and tangata whenua can also be involved.
28. A closure would provide time for the kaitiaki, kaumātua, hapū and the iwi to consider the effects and recovery of the taonga and what else may need to be completed.
29. The Regional Council has been monitoring a number of sites along the coast for many years. There are six sites that are surveyed twice a year. The survey design captures a representative sample of the rocky shore community at mid-shore height. Unfortunately, this tidal height means the survey do not often encounter pāua. However, the surveys provide a good overall picture of reef health, as well as an insight into how this relates to habitat and environmental factors such as natural sand movement. A number of significant sand burial events have been recorded over the years. But none have been recorded at the Manihi Road site, possibly because it is south of the Stony (Hangatahua) River and its high sediment input to the coastal marine area.
30. Council staff have expertise in monitoring the coastal marine area that may be able to be shared and enhanced by engagement with tangata whenua.
31. MPI fisheries officers do not seem to have a high public profile in the Taranaki community and could increase this and build some long-standing relationships, particularly with tangata whenua. More resources to effectively monitor the fisheries regulations would also be beneficial.

Financial considerations—LTP/Annual Plan

32. This memorandum and the associated recommendations are consistent with the Council's adopted Long-Term Plan and estimates. Any financial information included in this memorandum has been prepared in accordance with generally accepted accounting practice.

Policy considerations

33. This memorandum and the associated recommendations are consistent with the policy documents and positions adopted by this Council under various legislative frameworks including, but not restricted to, the *Local Government Act 2002*, the *Resource Management Act 1991* and the *Local Government Official Information and Meetings Act 1987*.

Iwi considerations

34. This memorandum and the associated recommendations are consistent with the Council's policy for the development of Māori capacity to contribute to decision-making processes (schedule 10 of the *Local Government Act 2002*) as outlined in the adopted long-term plan and/or annual plan. Similarly, iwi involvement in adopted work programmes has been recognised in the preparation of this memorandum.
35. Iwi and hapū consulted as part of developing this memorandum have been acknowledged above.

Community considerations

36. This memorandum and the associated recommendations have considered the views of the community, interested and affected parties and those views have been recognised in the preparation of this memorandum.

Legal considerations

37. This memorandum and the associated recommendations comply with the appropriate statutory requirements imposed upon the Council.



Date 26 April 2022

Subject: **New policy directions and the Treaty of Waitangi**

Approved by: A D McLay, Director - Resource Management
S J Ruru, Chief Executive

Document: 3033452

Purpose

1. The purpose of this memorandum is to:
 - a) update Members on the adoption of a Heads of Agreement between the Taranaki Regional Council (the Council) and Iwi Authorities on facilitating iwi engagement on the development of a *Natural Resources Plan for Taranaki* (NRP)
 - b) summarise recent work undertaken in exploring the principles of the Treaty of Waitangi and its application to the NRP development process.

Executive summary

2. The Council and eight Iwi Authorities have put in place an agreement for the next three years that supports tangata whenua capacity to respond to Council policy and planning processes on matters of common interest to ngā iwi o Taranaki.
3. The Heads of Agreement is an initial response acknowledging the significant national and regional demands being incurred by ngā iwi o Taranaki to respond and participate in freshwater planning processes.
4. Pursuant to section 8 of the *Resource Management Act 1991* (RMA), councils, when exercising its functions and powers under the Act, only needs to "...take into account the principles of the Treaty of Waitangi". However, the Government has signalled in its resource management reforms going forward that councils will need to **give effect** to the principles of the Treaty of Waitangi.
5. Already in its early discussions with tangata whenua, officers note considerable interest from tangata whenua on whether the Council will be seeking to give effect to the Treaty of Waitangi and/or future proof the Proposed Natural Resources Plan to reflect that position.
6. Over more recent years, organisations and the Waitangi Tribunal have adopted a range of principles, including:
 - Partnership
 - Active protection

- Redress
 - Rangatiratanga
 - Options
 - Mutual benefit
 - Reciprocity
 - The right of development
 - Equity.
7. Noting, that there is no standardised set of principles, the Council has the opportunity to engage with ngā iwi o Taranaki as part of the review of its Regional Policy Statement (RPS) and development of the NRP to, first, investigate what the agreed Treaty principles might mean within a Taranaki context and, second, discuss how we could future proof our planning documents to give effect to Treaty principles (and what that might look like).
8. Council officers note the significant amount of information, reports and case law available, which provide a strong foundation to inform discussions with iwi. Officers will report back to Council in due course on the outcomes of those discussions.

Recommendations

That the Taranaki Regional Council:

- a) receives the memorandum titled *New Policy Directions and the Treaty of Waitangi*
- b) notes the adoption of the Heads of Agreement
- c) notes Resource Management reforms propose to require councils to give effect to the Treaty of Waitangi
- d) notes that, as part of the development of a proposed NRP, Council will be discussing with tangata whenua opportunities for giving effect to the Treaty of Waitangi
- e) determines that this decision be recognised as not significant in terms of section 76 of the *Local Government Act 2002*
- f) determines that it has complied with the decision-making provisions of the *Local Government Act 2002* to the extent necessary in relation to this decision; and in accordance with section 79 of the Act, determines that it does not require further information, further assessment of options or further analysis of costs and benefits, or advantages and disadvantages prior to making a decision on this matter.

Background

9. As Members are aware, the promulgation of the *National Policy Statement for Freshwater Management 2020* (NPS-FM) includes specific requirements relating to the relationship between tangata whenua and regional councils in freshwater management.
10. The NPS-FM includes requirements relating to tangata whenua involvement in decision-making. Section 3.4 of the NPS-FM states that tangata whenua are to be involved (to the extent that they wish to be involved) in freshwater management and decision-making. This includes, but is not limited to, the identification and application of Te Mana o te Wai, the incorporation of mātauranga Māori into plans, the identification of freshwater values (in addition to kai) and to ensure tangata whenua are actively involved (to the extent they wish to be involved) in decision making processes relating to those values.

11. One of the aforementioned component parts of giving effect to the NPS-FM requirements above is giving effect to the principles of *Te Tiriti o Waitangi* (Treaty of Waitangi). The New Zealand Government is undertaking a programme to reform the delivery of resource management in New Zealand that anticipates greater recognition and provision for Māori in decision-making and in the incorporation of te ao Māori concepts in its planning documents, processes and decisions, including a need to give effect to the Treaty of Waitangi.
12. In order to recognise and respect the Crown's responsibilities to *Te Tiriti o Waitangi* (Treaty of Waitangi), the *Local Government Act 2002* already provides principles and requirements for local authorities that are intended to facilitate participation by Māori in local authority decision-making processes. The RMA further contains specific requirements relating to planning and managing the environment, including:
 - ensuring the relationship of Māori and their culture and traditions with their lands, water, sites, wāhi tapu and other taonga are recognised and provided for
 - recognising kaitiakitanga
 - identifying the need to take into account the principles of the Treaty of Waitangi
 - requiring local authorities to consult, including a specific requirement for consultation with iwi authorities when developing a regional policy statement or plan
 - requiring iwi management plans to be considered when developing a regional policy statement or plan.
13. However, going forward, it is clear that recent and future resource management reforms anticipate greater involvement of Māori in decision-making and an expectation that councils will need to give effect to the Treaty of Waitangi. This memorandum provides a brief overview of some of the work undertaken to date by the Council to recognise and give effect to the Treaty of Waitangi, and some of the work to come.

Heads of Agreement

14. As verbally reported to the last Policy and Planning Committee of 15 March 2022, the Council and eight Iwi Authorities have reached an agreement for the next three years that supports tangata whenua capacity to respond to Council policy and planning processes on matters of common interest to ngā iwi o Taranaki.
15. Of note, this Agreement is an initial response acknowledging the significant national and regional demands being placed on ngā iwi o Taranaki to respond and participate in freshwater planning processes. However, it is also part of enabling Māori to have greater involvement and input into planning processes.
16. The Agreement notes that the Parties will act in a manner based on the following principles:
 - promote the social, economic, environmental and cultural well-being of both the regional community and iwi o Taranaki
 - respect the mana of iwi o Taranaki
 - recognise the visions, aspirations, knowledge and expertise of iwi o Taranaki. Listen openly and actively to the advice provided pursuant to this Agreement
 - give effect to the principles of *Te Tiriti o Waitangi*

- work together in the spirit of partnering, sincerity, mutual respect and good faith
 - recognise and provide for the application, in relation to te taiao, of kawa, tikanga (including kaitiakitanga), and mātauranga Māori
 - work together to find solutions to issues and to do this with goodwill, and a sense of shared purpose
 - commit to open, honest and transparent communication and to protect the confidentiality of information provided within their relationship.
17. The agreement recognises the benefit of working together and the need to make the relationship work as efficiently as possible so as to promote a joint approach, achieve integrated management, and make the best use of available resources.
18. To this end, Council has agreed to fund an independent iwi environmental unit comprising of two full time equivalents (to be appointed by the Iwi Parties) and associated administrative and servicing costs. The iwi environmental unit will be administered by Te Atiawa.
19. The iwi environmental unit will assist to deliver on some of the NPS-FM requirements by informing the development of a proposed combined Regional Policy Statement and NRP. In particular, they will assist in providing an iwi of Taranaki perspective on:
- issues of significance to iwi o Taranaki (as identified in the Regional Policy Statement for Taranaki)
 - a freshwater vision(s) for Taranaki (for the *Regional Policy Statement for Taranaki*)
 - how to define and give effect to Te Mana o te Wai, including relevant Plan provisions, in a Taranaki context
 - freshwater values and objectives for each freshwater management unit
 - limits and targets relating to compulsory and non-compulsory freshwater values, including māhinga kai, in accordance with the National Objectives Framework
 - desired environmental and cultural outcomes for fresh water, including establishing action plans to provide for identified freshwater values under the National Objectives Framework
 - Mātauranga (traditional knowledge) framework for inclusion in Plan provisions, recognising iwi o Taranaki right to protect their cultural and intellectual property rights
 - identification and scheduling of taonga species as identified by iwi o Taranaki
 - assist in the identification of sites of historic and cultural significance to Māori as identified by iwi.
20. Of note, the Heads of Agreement is a starting point for 'operationalising' how the Council can give effect to Treaty of Waitangi. It is something that can be built on overtime and/or complemented by other initiatives.

Resource management reform and the Treaty of Waitangi

21. As previously noted, the Heads of Agreement sets out a number of principles which the parties will give effect to, including to "...give effect to the principles of Te Tiriti o Waitangi" (I.4). This is a 'step up' from how Council traditionally recognises the Treaty but is consistent with national directions in this area.

22. As Members are aware, pursuant to section 8 of the RMA, when exercising its functions and powers under the Act, the Council only needs to “...**take into account** the principles of the Treaty of Waitangi”. However, the Government has signalled in its resource management reforms going forward that councils will need to **give effect** to the principles of the Treaty of Waitangi.
23. In 2020, the Government released the Randerson report entitled *New Direction for Resource Management in New Zealand*. The Randerson report recommended a change in emphasis in relation to how local authorities are upholding the principles of the Te Tiriti o Waitangi. The report noted that under the current resource management system there is a lack of recognition and provision for te ao Māori in its purpose and principles. The report noted the following:
- “...[section 8 of the RMA] does not require those with responsibilities under the Act to give effect to Treaty principles but only to take them into account. This is less than an obligation to apply them. When ranked with the competing interests of others this means that guaranteed Treaty rights may be diminished in the balancing exercise that the Act requires.*
- We concur with the large number of reports, expert opinions and submissions on the Tiriti clause that the current “section 8 of the RMA is entirely inadequate for the degree of recognition and protection of Māori interests that is required by the Treaty.”*
24. The Randerson report proposed a new Treaty of Waitangi clause that would read as follows: “...To achieve the purpose of this Act, those exercising functions and powers under it must **give effect** to the principles of Te Tiriti o Waitangi.” The report considered that the change to give effect to the principles of the Treaty of Waitangi is and will have a positive impact including:
- helping to address the lack of alignment between the Crown, local authorities and mana whenua on the role of local authorities in Te Tiriti relationship
 - providing a lens through which other sections of Part 2 will be viewed and a catalyst for the partnerships needed to achieve te ao Māori outcomes
 - helping to prevent future Tiriti breaches and claims.
25. Numerous organisations, as part of the resource management review, recommended and showed support for the RMA to expressly give effect to the principles of the Treaty of Waitangi, including the Waitangi Tribunal, Environmental Defence Society, Productivity Commission, and Te Rūnanga o Ngāti Ruanui Trust. The Randerson report and its recommendations were subsequently adopted by the Government.
26. This new recognition signals a significant shift for councils in the weighing they will give to Treaty of Waitangi considerations. However, it is noted that this higher weighing of giving effect to the principles of Te Tiriti is not new for other entities under other legislation, e.g. the Department of Conservation under the *Conservation Act 1987*.

The Natural Resources Plan and the Treaty of Waitangi

27. Already in its early discussions with tangata whenua, officers note considerable interest from tangata whenua on whether the Council will be seeking to give effect to the Treaty of Waitangi and/or future proof the Proposed Natural Resources Plan to reflect that position.
28. This has not come as a surprise, as a review of local iwi management plans shows many references to the Treaty of Waitangi and iwi expectations on how local authorities should be incorporating it into its responsibilities.

29. In law, there is a preference for referring to the principles rather than the wording of the Treaty of Waitangi itself. This is deliberate. The principles interpret the Treaty as a whole, including its underlying meaning, intention and spirit, to provide further understanding of the expectations of signatories. Referring to the principles enables the Treaty partnership to go beyond the transaction that was made in 1840 and evolve over time.
30. Over more recent years, organisations and the Tribunal have adopted a range of principles, including a selection of the following which are most commonly used:
- partnership
 - active protection
 - redress
 - rangatiratanga
 - options
 - mutual benefit
 - reciprocity
 - the right of development
 - equity.
31. Noting, that there is no standardised set of Treaty principles, the Council has the opportunity to engage and partner with ngā iwi ō Taranaki on what our relationship might look like as part of the review of its RPS and development of the NRP. This work includes investigating what are the agreed Treaty principles for Taranaki and how we could strategize and future proof our planning documents to give effect to Treaty principles.
32. Council officers note the significant amount of information, reports and case law available, which provide a strong foundation to inform discussions with iwi. Officers will report back to Council in due course on its work and the outcomes of those discussions.

Financial considerations—LTP/Annual Plan

33. This memorandum and the associated recommendations are consistent with the Council's adopted Long-Term Plan and estimates. Any financial information included in this memorandum has been prepared in accordance with generally accepted accounting practice.

Policy considerations

34. This memorandum and the associated recommendations are consistent with the policy documents and positions adopted by this Council under various legislative frameworks including, but not restricted to, the *Local Government Act 2002*, the *Resource Management Act 1991* and the *Local Government Official Information and Meetings Act 1987*.

Iwi considerations

35. This memorandum and the associated recommendations are consistent with the Council's policy for the development of Māori capacity to contribute to decision-making processes (schedule 10 of the *Local Government Act 2002*) as outlined in the adopted long-term plan and/or annual plan. Furthermore, all six iwi management plans have been referred to in the preparation of this memorandum.

Community considerations

36. This memorandum and the associated recommendations have considered the views of the community, interested and affected parties and those views have been recognised in the preparation of this memorandum.

Legal considerations

37. This memorandum and the associated recommendations comply with the appropriate statutory requirements imposed upon the Council including consideration of the National Policy Statement for Freshwater Management 2020.



Whakataka te hau

Karakia to open and close meetings

Whakataka te hau ki te uru	Cease the winds from the west
Whakataka te hau ki tonga	Cease the winds from the south
Kia mākinakina ki uta	Let the breeze blow over the land
Kia mātaratara ki tai	Let the breeze blow over the ocean
Kia hī ake ana te atakura	Let the red-tipped dawn come with a sharpened air
He tio, he huka, he hauhu	A touch of frost, a promise of glorious day
Tūturu o whiti whakamaua kia tina.	Let there be certainty
Tina!	Secure it!
Hui ē! Tāiki ē!	Draw together! Affirm!

Nau mai e ngā hua

Karakia for kai

Nau mai e ngā hua	Welcome the gifts of food
o te wao	from the sacred forests
o te ngakina	from the cultivated gardens
o te wai tai	from the sea
o te wai Māori	from the fresh waters
Nā Tāne	The food of Tāne
Nā Rongo	of Rongo
Nā Tangaroa	of Tangaroa
Nā Maru	of Maru
Ko Ranginui e tū iho nei	I acknowledge Ranginui above and
Ko Papatūānuku e takoto ake nei	Papatūānuku below
Tūturu o whiti whakamaua kia	Let there be certainty
tina	Secure it!
Tina! Hui e! Taiki e!	Draw together! Affirm!

AGENDA AUTHORISATION

Agenda for the Policy and Planning Committee meeting held on Tuesday 26 April 2022.

Confirmed:



20 Apr, 2022 1:34:39 PM GMT+12

A D McLay

Director Resource Management

Approved:



20 Apr, 2022 1:18:21 PM GMT+12

S J Ruru

Chief Executive