

Submission on

Te mahere urutaunga ā-motu (tuhinga hukihuki) - Draft National Adaptation Plan



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Foreword – Sustainable Business Council

The Sustainable Business Council (SBC) is proud to partner with the Climate Leaders Coalition (CLC) to respond to the Government's draft National Adaptation Plan and Managed Retreat proposals.

The importance of accelerating our actions on climate change with a double-pronged approach through both mitigation and adaptation has never been greater.

As New Zealand moves to turn its climate ambition into action through the implementation of our first Emissions Reduction Plan, so too must we maximise the opportunities before us to build the resilience required to manage the irreversible impacts of a warming world.

To date, our international and national climate change response has largely focused on mitigation – essential if we are to stop, slow and reverse climate change. However recent and ongoing severe weather events continue to serve as urgent reminders that climate change is already happening, which means mitigation alone is not enough. This was acutely reinforced in March by the Intergovernmental Panel on Climate Change through the release of their AR6 2022: Impacts, Adaptation and Vulnerability report.

Against this backdrop, the National Adaptation Plan and Managed Retreat proposals represent a significant step forward in the development of New Zealand's adaptation response to climate change. We welcome the opportunity to respond to the initiatives the Government is proposing to lift the country's adaptive capacity.

This document represents the collective views of the members of SBC and CLC, a group of more than 160 businesses who contribute more than a third of New Zealand's GDP. We have worked with our members over this short consultation period, drawing on their insights and expertise to develop 13 key recommendations for accelerating adaptation in New Zealand by outlining impactful measures that will support an effective and enduring adaptation response.

Our recommendations include a long-term enduring National Adaptation Framework to guide our response over successive NAPs, clear targets, indicators and accountability, development of a national adaptation financing strategy, and a platform for open climate data to enable efficient and effective decision making – among a range of other practical proposals.

These are complex issues, with multiple stakeholders and high stakes and we welcome the opportunity to respond to the first step in building the country's climate resilience and adaptation response. We continue to call for an ongoing process which enables meaningful engagement by the private sector and other stakeholders as this and future NAPs are developed and implemented.

We stand ready to work alongside Government to develop and implement a plan that will help ensure a resilient and thriving future for all New Zealanders.

Mike Burréll Executive Director Sustainable Business Council

Foreword – Climate Leaders Coalition

The flooding on the East and West Coasts of New Zealand are recent examples of the sorts of climate change impacts we are seeing more frequently and severely. This means that mitigation alone is not enough, especially without large-scale national and international climate action. Therefore, we must both rapidly reduce emissions and adapt to the existing and future effects of climate change.

With our signatories representing approximately one third of New Zealand's GDP and nearly 60 percent of gross domestic emissions, our businesses understand how critically important a double-pronged approach to climate change is.

We are already taking action on the dual challenge before us both in reducing our emissions, as well as building the resilience of our businesses to the current and future impacts of a changing climate.

This includes setting up an Adaptation Working Group with SBC. Together, we have developed a definition of what adaptation means for businesses and are raising the profile of business adaptation, as well as lifting business capability and action on adaptation.

The Coalition will also soon launch a new Statement of Ambition reflecting our signatories' desire to unite New Zealand businesses to accelerate our transition towards a zero-carbon and climate resilient future, where and all New Zealanders, can thrive. Importantly on adaptation, this will include requiring signatories to consider and publicly disclose their climate opportunities alongside their risks, as well as considering assessing nature-based risks and opportunities, and setting opportunity maximisation and risk reduction objectives and targets. They will also develop climate action plans that describe how these risks and opportunities, as well as targets/objectives will be monitored, managed, and/or achieved and the practical steps their companies are taking to adapt to a changing climate.

Never before has this kind of collective leadership been more important or urgent, as New Zealand moves to harness the opportunities posed by securing a low-emissions and climate resilient future. We are at a critical moment as a nation and one that requires urgent and bold action at a scale and pace to meet the enormous challenges ahead. In partnership with SBC, this document identifies key recommendations that the Government can implement to develop an effective adaptation response.

The Coalition is stepping up to demonstrate the role business can play by taking meaningful action on adaptation. We commend the Government on developing New Zealand's first draft National Adaptation Plan. This is a critical next step forward in our nation's adaptation response. We now call on the Government to work with business to deliver the final plan that provides clarity and certainty on a collective, and most importantly enduring, pathway forward.

Mike Bennetts Convenor Climate Leaders Coalition

Executive Summary

- 1. This document represents the combined view of SBC and CLC's more than 160 member companies on the the Government's consultation documents *Kia urutau, kia ora: Kia āhuarangi rite a Aotearoa* | *Adapt and thrive: Building a climate-resilient New Zealand*, which overviews the draft National Adaptation Plan and outlines proposals for managed retreat and flood insurance; and *Te mahere urutaunga ā-motu (tuhinga hukihuki)*, the draft National Adaptation Plan (NAP).
- 2. This submission is the first time SBC and CLC have provided a collective view on New Zealand's adaptation response. However, many of our members are already actively reporting on, planning for and responding to climate risks facing their businesses. Many of our members will be required to disclose their climate-related financial risks under the new legislation and are actively identifying and addressing climate risks in preparation for reporting. Some are diversifying their supply chains to mitigate risk of global inputs being affected by the physical impacts of climate change. Others are incorporating adaptation considerations into their business planning and investment decisions, such as placement and engineering of new physical infrastructure.
- 3. Adapting to the impacts of climate change must be as much of a priority for New Zealand as reducing our emissions. Under the Paris Agreement, we have committed, alongside the global temperature goal, to increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience. The Climate Change Response Act has the purpose of providing a framework by which New Zealand can not just contribute to global mitgation efforts but also prepare for, and adapt to, the effects of climate change.
- 4. Despite that, climate policy and practice to date has overwhelmingly focussed on emissons reductions. Adverse impacts of climate change are already being felt globally and within New Zealand. That makes the adaptation challenge as urgent and critical as the mitigation task.
- 5. The issues surrounding how we adapt to the impacts of climate change and build a more resilient future for New Zealand are complex. They are not questions that can be answered in a single submission or through a standard six-week consultation. We have focused this submission on practical changes to the NAP and managed retreat proposals and look forward to a continuing dialogue to enable an inclusive and effective adaptation response.
- 6. The top three recommendations we urge the Government to prioritise in the final NAP are:
 - i. Establish an enduring National Adaptation Framework that goes beyond a six-year timeframe.
 - ii. Engage early on managed retreat, including on risk, costs, and responsibilities.
 - iii. Set national adaptation targets and indicators to measure progress.
- 7. These and our other key recommendations are set out in the table on the following page. Our members stand ready to work alongside government to further develop and implement this and future NAPs to support a more sustainable and resilient future for New Zealand.

1. Key recommendations

Theme		We recommend that the Government:	Page ¹
	1.	Commit to genuine, ongoing partnership on New Zealand's adaptation response	8
	2.	Establish an Adaptation Technical Advisory Group	9
	3.	Establish an enduring National Adaptation Framework that goes beyond a six-year timeframe	10
Providing an enduring platform	4.	Provide for national adaptation targets and indicators, and central accountability for progress	11
and collaboration	5.	Establish early and ongoing engagement on managed retreat, including on risk, costs, and responsibilities	13
	6.	Align NAPs with other relevant policies, including Emissions Reduction Plans	14
	7.	Develop a national approach to adaptation financing with a clear role for the financial sector	15
Providing an enabling	8.	Provide short-term direction to local authorities, including on managed retreat	17
environment and incentives for an effective	9.	Provide immediate voluntary actions for infrastructure and planning resilience	18
adaptation response	10.	Approach any flood insurance policy as a targeted intervention within a wider flood management strategy	19
Providing data,	11.	Establish a centralised climate risk database	20
information and guidance to	12.	Provide stakeholder education and awareness raising on adaptation	21
support an effective adaptation response	13.	Focus Government-backed climate research on practical enablers of adaptation	22

¹ Page reference within this document for more detail on each proposal.

2. Introduction

The Sustainable Business Council (SBC) and the Climate Leaders Coalition (CLC) are pleased to provide this submission on the Government's consultation documents:

- *Kia urutau, kia ora: Kia āhuarangi rite a Aotearoa* | *Adapt and thrive: Building a climate-resilient New Zealand*, which overviews the draft National Adaptation Plan and outlines proposals for managed retreat and flood insurance; and
- Te mahere urutaunga ā-motu (tuhinga hukihuki), the draft National Adaptation Plan (NAP).

We acknowledge these documents as part of a suite of reforms touching directly or indirectly on New Zealand's climate risk and adaptation response, including the upcoming Climate Adaptation Act as part of the Resource Management Act reform process. Also relevant are climate-related financial disclosures and the associated sectoral scenario analysis work that is underway.

This submission represents the combined view of the SBC's and CLC's combined 164 member companies on the NAP consultation documents. The submission has been developed following workshops and direct engagement with SBC members and CLC signatories in May 2022.

We recognise the work of Beca, who provided analysis of the consultation documents, engagement with members, and development of this submission.

With limited time between publication of the draft NAP and the NAP being finalised by August 2022, we have provided recommendations that will make the most impact on an effective adaptation response and can readily be incorporated into the NAP before it is finalised.

The short (less than six week) consultation period for the NAP and Managed Retreat proposals means this submission is necessarily high-level, as we have not had a chance to get into the detail of many aspects of the proposals and their implications with our members. We therefore call in this submission for an ongoing process which enables meaningful engagement by the private sector and other stakeholders as this and future NAPs are developed and implemented. SBC and CLC members operate across New Zealand and many are already planning for and responding to climate-related risks and impacts on their businesses, customers and communities. This means we have broad and deep insights to share to help New Zealand develop an inclusive and effective adaptation response.

Rather than responding directly to the Ministry for the Environment's 72 consultation questions, we have organised our comments and recommendations around three themes that reflect our members' key priorities:

- i. Providing an enduring platform and collaboration.
- ii. Providing an enabling environment and incentives for an effective adaptation response.
- iii. Providing data, information and guidance to support an effective adaptation response.

3. Principles that guide our engagement

As with our engagement on climate policies focused on emissions reductions, we have formulated this input based on the overarching pursuit of a New Zealand with:

- i. a society that is fair, inclusive, and diverse.
- ii. an economy that is:
 - open, recognising our role as a trading nation.
 - globally connected, virtually and physically.
 - supported by market regulation that is incentive focused, intervention cautious.
- iii. a climate change response commensurate with the urgent and rapid action needed to keep 1.5°C within reach, comprising:
 - science-based mitigation with effective measuring and reporting of emissions.
 - adaptation efforts that are technology-based, risk- and future-focused.
 - a just transition that is fair, equitable, and inclusive for all New Zealanders.

In 2022, SBC and CLC opened a dialogue with members on adaptation in a business context. This led to the establishment of the SBC/CLC Adaptation Working Group. The Group has developed the following definition of adaptation in a business context:

'Climate adaptation is the process of businesses proactively adjusting to current and predicted climate change impacts. This involves businesses making decisions to prepare for the physical and transition impacts of climate change on their business, employees, customers, suppliers, investees, and communities'.

Throughout this submission, we also use the term "maladaptation", which we define consistently with the IPCC's 6th Assessment Report:²

Maladaptation is defined as "actions that may lead to increased risk of adverse climate-related outcomes, increased vulnerability to climate change, or diminished welfare, now or in the future."

² See IPCC AR6 Working Group II Summary for Policy Makers at p6, available here.

4. Providing an enduring platform and collaboration

Key recommendations:

- Commit to genuine, ongoing partnership on New Zealand's adaptation response
- Establish an Adaptation Technical Advisory Group
- Establish an enduring National Adaptation Framework that goes beyond a six-year timeframe
- Provide for national adaptation targets and indicators, and central accountability for progress
- Establish early and ongoing engagement on managed retreat, including on risk, costs, and responsibilities
- Align NAPs with other relevant policies, including Emissions Reduction Plans
- Develop a national approach to adaptation financing with a clear role for the financial sector

This theme primarily relates to the NAP's first and third focus areas: to reform institutions to be fit for a changing climate and to embed climate resilience across government strategies and policies.

The recommendations in this section focus on clear long-term direction and framework to guide adaptation and successive adaptation plans, including through:

- a risk framework that includes the NAP providing criteria that can be used to define acceptable and intolerable risk, such that 'bottom lines' can also be introduced through the NAP (e.g. risk to public safety).
- assessing what the costs of climate change adaptation will be, how they will arise, how these costs can be minimised, and which parties should bear those costs.
- ongoing engagement over coming years with all relevant stakeholders on key policy issues.
- monitoring progress against indicators within the six-year NAP cycle, to assess whether the NAP is meetings its objectives and targets.

4.1 Commit to genuine, ongoing partnership on New Zealand's adaptation response

The draft NAP correctly acknowledges that government cannot do this alone. The private sector and other stakeholders will play an important role in supporting New Zealand's adaptation efforts.

Recommendation 1: That the NAP include an express, ongoing role for businesses and other stakeholders in developing and implementing New Zealand's adaptation response. The brief consultation period on this draft NAP has been insufficient for meaningful contributions on the NAP's content by the business community. A clear and ongoing mechanism to enable the private sector and all stakeholders to play a role in the NAP's further development and implementation will enable a more inclusive response, and for pooling of expertise.

Many of our members have existing adaptation practices and knowledge to contribute to the policy process but the short NAP consultation period has not been conducive to surfacing these in a meaningful way. For example, SBC and CLC established an Adaptation Working Group (AWG) in February 2022, with the goals of:

- Increasing the focus on adaptation by SBC/CLC members;
- Sharing insight and experience between members; and
- Advocating for greater action on adaptation.

With 17 members and signatories participating as at May 2022, the AWG meets every six weeks to advance its goals.

The AWG will play a key role in advancing adaptation knowledge and practice amongst members. It will also help the business sector to have a leading role in shaping government policy and the wider adaptation conversation in New Zealand.

Recommendation 2: That a specific action be included in the NAP around working with the private sector to draw on adaptation insights from business and local government, directing guidance where it is needed most. Different organisations are at different stages of their adaptation journey. Many businesses have already undertaken climate risk assessments and developed adaptation plans. These experiences are already demonstrating that adaptation cannot work well without bringing together various adaptation approaches and breaking down policy silos at all levels of government.

The MfE-led process around biodiversity incentives earlier this year was a good example of bringing together a range of technical and industry expertise to develop and test recommendations that could be put to Ministers.

Recommendation 3: That an approach similar to the one outlined above be considered for adaptation issues.

Recommendation 4: That the NAP recognise the role of stakeholders in the following specific ways:

- Include in the NAP's summary of Actions in Appendix 3 an additional column with roles and key stakeholders, including businesses and local authorities. For stakeholders to effectively collaborate with Government on adaptation, roles and responsibilities should be clear. Adaptation stakeholders include insurers, financial institutions and lifeline utilities; all will be instrumental in enhancing the nation's resilience to climate change.
- Include in Appendix 4: Roles and responsibilities for adaptation key stakeholders and their roles as they relate to each action in Appendix 3 to make it clear to businesses reading the NAP where they fit in.
- Include an action committing the Government to include stakeholders in a meaningful process that helps to inform the Climate Change Commission's biannual progress reports on the NAP. The Climate Change Commission will make biannual progress reports on this NAP and future NAPs. This provides an important opportunity for businesses and other stakeholders to use this opportunity to provide their views on progress.

4.2 Establish an Adaptation Technical Advisory Group

Recommendation 5: Establish an Adaptation Technical Advisory Group to enable ongoing consultation. This Adaptation Technical Advisory Group would build on the learnings of the previous Climate Change Adaptation Technical Working Group. This Adaptation Technical Advisory Group should include businesses but have a

diverse range of other stakeholders (in addition to central government). The Group should comprise the technical skills and perspectives needed to ensure an inclusive and enduring adaptation response in New Zealand, including experts on physical climate risk, property rights and other legal implications, managed retreat and adaptation planning, insurance experts, local government, iwi/Māori, and private sector representatives.

The Adaptation Technical Advisory Group should have an ongoing, collaborative role with central government to provide recommendations and policy advice.

4.3 Establish an enduring National Adaptation Framework that goes beyond a sixyear timeframe

Although the NAP provides a vision and goals, it is not clear how these will be achieved over the long-term and how this six-year NAP fits within a wider, enduring framework. A NAP that covers policies or potential policies over the next six years – many of which are simply workstreams that were already in progress – does not provide sufficient certainty for planning and decision-making over longer timeframes.

Cross-party support for the first three emissions budgets has been an important signal in response to the private sector's calls for long-term certainty in the climate response. Greater clarity over the policy approach to adaptation, as well as mitigation, would provide more certainty to all actors in the system, including those directly engaged in at-risk areas, such as insurers and banks.

Recommendation 6: Create a National Adaptation Framework to provide an enduring platform over successive Plans. A National Adaptation Framework will set a road map towards achieving the vision and goals and will clearly paint a picture of how each successive NAP will contribute to moving New Zealand towards a more resilient future.

Recommendation 7: The National Adaptation Framework should be developed in true partnership with businesses and other stakeholders, in acknowledgement of the important role these parties will play over the longer term in achieving the vision.

An enduring National Adaptation Framework will include:

- a clear vision statement;
- a roadmap for achieving the vision considering short, medium and long-term time horizons; and
- targets against which progress on adaptation under this NAP and successive NAPs can be measured.

Recommendation 8: That the National Adaptation Framework provides a clear process for the preparation of future NAPs and how actions in successive NAPs should be prioritised based on the assessment of progress against indicators or other measures. To that end, we recommend that the roadmap incorporate the flexibility needed by using a Dynamic Adaptative Pathways approach. Setting triggers based on progress monitoring could, for example, move us into a more aggressive future adaptation pathway for New Zealand should monitoring reveal we are not achieving the gains in resilience needed over time.

In particular, the NAP must recognise and address the Crown's role as Treaty partner, and ensure that individual actions taken under the NAP and managed retreat proposals recognise that relationship and the rights of tangata whenua under Te Tiriti o Waitangi. We support the development of an adaptation response in line with the Rauora Framework and encourage the Government to engage meaningfully to understand how Māori see a managed retreat system working for Māori, and what partnership means in this context.

Recommendation 9: That the National Adaptation Framework includes adaptation targets and indicators. This is discussed in the next section.

4.4 Provide for national adaptation targets and indicators, and central accountability for progress

Recommendation 10: That the Government should further research what New Zealand can do based on successful adaptation responses internationally. Many other countries have moved faster on adaptation than New Zealand has. We recommend Government further research and incorporate knowledge and experiences from abroad in the NAP. It may be appropriate for international adaptation experts to sit on, or consult with, the Adaptation Technical Advisory Group we recommend above.

Targets and indicators

Recommendation 11: That clear adaptation targets and indicators be established for New Zealand. The draft NAP includes goals for New Zealand and identifies adaptation processes over time (in Figure 5). This process diagram demonstrates the importance of monitoring and review and mentions indicators and measures to define progress. The NAP and the long-term framework should identify what these measures and indicators are, which will provide clarity to our members on how adaptation progress will be measured over time.

Recommendation 12: That the National Adaptation Framework mentioned above provides targets setting targets and timeframes for reductions of a quantifiable percentage of priority risks from climate change. These targets must have direct line of sight to the National Climate Change Risk Assessment's priority risks.

Climate Leaders Coalition signatories are required to assess their climate-related risks and opportunities. CLC members will soon be required to set climate change risk reduction and opportunity targets to mitigate and/or to manage the risks identified and maximise opportunities.

Recommendation 13: That a similar approach to that outlined above be explored at a national and/or local policy level. To avoid duplication, build on existing approaches such as this one rather than replicating or replacing it.

Any adaptation targets for New Zealand must:

- be action-oriented;
- be grounded in globally-accepted frameworks; and
- recognise relative priorities between a broad range of physical and transitional risks.

Recommendation 14: That a National Adaptation Framework provides indicators against which progress can be measured. Clear and measurable indicators for adaptation should be incorporated into the NAP. Although the Climate Change Commission will prepare biannual progress reports on the NAP beginning in 2024, it is not clear from the NAP how progress will be measured.

Adaptation indicators are essential to:

- monitor progress towards the implementation of adaptation policies, strategies and actions;
- target, justify, and monitor funding for adaptation programmes;
- communicate adaptation priorities to policymakers and stakeholders;

- compare adaptation progress across sectors and regions; and
- provide inputs for international climate change-related processes and mechanisms (e.g. those to which New Zealand is a party under the UN Framework Convention on Climate Change (UNFCCC)).

Recommendation 15: That New Zealand's adaptation indicators be adopted from international examples and aligned with the National Climate Change Risk Assessment's (NCCRA) priority risks. These indicators can be taken from any of several international examples and supported by Stats NZ – which only has one action under this NAP – compiling the relevant information. Examples of international indicators to be considered include:

- The UN Economic Commission for Europe (UNECE) has released a set of 44 recommended indicators
 – including adaptation indicators for measuring climate change in an internationally comparable way.³
- The European Environment Agency also provides indicators designed to support all phases of environmental policy making, from designing policy frameworks to setting targets, and from policy monitoring and evaluation to communicating to policymakers and the public.⁴
- The UN Disaster Resilience Scorecard provides a set of assessments that allow local governments to
 monitor and review progress and challenges in the implementation of the Sendai Framework for
 Disaster Risk Reduction: 2015-2030, assessing disaster resilience.⁵ It is structured around UNISDR's
 Ten Essentials for Making Cities Resilient. This scorecard may be a useful tool that Government could
 adopt and encourage local authorities to use in assessing the resilience of their communities.
 Businesses and other stakeholders should be involved in identifying the indicators.
- Government could also look for inspiration to the new EU Strategy on Adaptation to Climate Change.⁶

Clear progress indicators will allow the independent Climate Change Commission to clearly and robustly assess and measure progress towards achieving our vision. As mentioned above, this should include a clear framework on how to monitor progress over time, which will empower government to adjust our adaptation pathways based on risk information over time.

Central accountability

Although the Commission will prepare progress reports, the government is not obligated to respond to them.

Recommendation 16: A requirement for a public response from the Government of the day to the Climate Change Commission's progress report be included in the final NAP, so that these biannual progress reports are meaningful and result in course corrections, where needed.

Recommendation 17: That one entity, such as the Ministry for the Environment (MfE), be primarily accountable for the NAP and responsible for responding to the Climate Change Commission's progress reports. The NAP is a cross-government plan for adapting to climate change, but it lacks consolidated coordination or central accountability. Oversight of the NAP must sit with the Climate Change Chief Executives Board to enable effective strategic coordination across the public sector.

³ See https://sdg.iisd.org/news/unece-releases-44-recommended-climate-indicators-for-nationalreporting/#:~:text=Adaptation%20indicators%20cover%3A,under%20productive%20and%20sustainable%20agricu lture.

⁴ See https://climate-adapt.eea.europa.eu/knowledge/c-a-indicators.

⁵ See https://www.undrr.org/publication/disaster-resilience-scorecard-cities.

⁶ See https://ec.europa.eu/clima/eu-action/adaptation-climate-change/eu-adaptation-strategy_en.

While overarching accountability for the NAP and responding to the Commission's progress reports should sit with one entity, climate change policy expertise (including on adaptation and mitigation) should be integrated across the public sector. Currently, MfE is the primary agency for engagement on climate change, however, climate change is a cross-cutting issue that has impacts and requires consideration across all portfolios.

Recommendation 18: That budget and resources are dedicated to building and embedding climate change (adaptation and mitigation) expertise into and across government departments.

4.5 Establish early and ongoing engagement on managed retreat, including on risk, costs, and responsibilities

The NAP does not contain a framework for either estimating what the costs of climate change adaptation would be or how costs would be shared. It also does not contain clear actions to explore these issues.

This is most acute in the area of managed retreat. "Managed retreat" should be the action of last resort and that we should collectively (government, business and other stakeholders) pursue all viable options to avoid the need for managed retreat except in exceptional circumstances. We recognise, however, that this eventuality will be more orderly, efficient and fair if it is planned for well in advance.

Although this first draft NAP cannot provide all of the answers on planning for and funding managed retreat, a level of detail beyond the high-level objectives and principles for funding contained in the proposals is required to provide more clarity on the forward process. SBC and CLC would welcome the opportunity to work with government on funding and financing of climate change adaptation.

Ultimately, combined efforts of the market and government will develop the solutions to these issues. However, businesses need confidence that there is a path towards promptly answering the difficult question of 'who pays for what' and developing a risk- and cost-sharing approach. Clarity on the direction of travel would also ensure private asset owners can make risk-based decisions, including whether to acquire or upgrade a family home and for how much. Lack of clarity and associated risks could accelerate a disorderly and unmanaged retreat from perceived high-risk areas.

Recommendation 19: That an exposure draft of the Climate Adaptation Bill is released prior to its introduction to Parliament. The draft should be developed in dialogue with key stakeholders and Treaty Partners, including business, local leaders and Iwi/Māori.

Based on that input, the exposure draft should outline a proposed approach to risk allocation and cost sharing for managed retreat, learning from lessons from the past (including, for example Matata and post-earthquake Christchurch). The draft should reflect the following considerations:

- How the costs and benefits of adaptation options are evaluated;
- How costs can be met (i.e. through infrastructure maintenance/upgrade, buy-out costs for managed retreat, protection of cultural heritage, or sectoral change strategies);
- How different types of owners are treated;
- The extent to which those who benefit from adaptation, financially or otherwise, should fund it;
- Drawing clear lines of eligibility, timing or otherwise, to limit the overall costs and provide the right incentives;
- Regard for vulnerability or means-testing at the individual, business, sector or community level.

Any processes need to factor in all stakeholders including tenants, businesses and non-resident owners (e.g. holiday houses).

We provide the following further specific feedback on the objectives and principles of legislation in Table 1 and of funding responsibilities in Table 2 of the consultation document:

- The objectives and principles are focused on legislation and do not acknowledge or reflect the inherent trade-offs and sacrifices that will likely occur, so they offer no way for exploring or resolving these.
- Table 2's 'reduce hardship' objective should be narrowed to reduce hardship from managed retreat.
- 'Reducing Crown liabilities' should be broadened to reflect the need for a framework for managing the costs over time including how the costs will be shared among the Crown and other relevant parties.
- The fairness principle should also extend to individuals within communities.
- The principles should reflect a Māori perspective on ownership.
- The principles should draw a line on timing so that people are clearly on notice in relation to future development. This both provides the right incentives in relation to future development and avoids exposing the rest of the community to the costs of continuing inappropriate development.
- Amongst a range of factors, insurability should be a factor in considering whether to initiate managed retreat from an area. As the Government has identified, insurance premiums are calculated for the risks faced in the insured period only (i.e. the next year). As such, they do not explicitly signal what the risks might be decades into the future and so can only be one of several factors taken into account.
- Post event insurance payments could conceivably be allocated to relocation. However, there are a
 range of factors that mean achieving this will be challenging in practice. It would likely be necessary for
 the managed retreat plan to already be agreed, as otherwise homeowners will want to repair.
 Insurance payments would inherently be limited to the insured losses suffered in the event, which
 would depend on the insurance penetration and the insured damage per home.

Recommendation 20: To inform development of the Climate Adaptation Act, we recommend government look to international examples on funding of climate change adaptation. For example, the LIFE programme cofinances projects in the areas of urban adaptation and land-use planning, resilience of infrastructure, sustainable management of water in drought-prone areas, flood and coastal management, resilience of the agricultural, forestry and tourism sectors, and support to the EU's outermost regions: preparedness for extreme weather events, notably in coastal areas.⁷ It provides action grants for best practice, pilot and demonstration projects that contribute to increase resilience to climate change. The climate sub-programme also promotes integrated projects that implement EU policy and strategy on climate change adaptation.

4.6 Align NAPs with other relevant policies, including Emissions Reduction Plans

Recommendation 21: We recommend Government provide a clear and transparent explanation and ongoing process for coordination so that this and future NAPs remain aligned with New Zealand's first and successive ERPs and other relevant policies. That way, Government will be providing a unified national response to climate change, rather than a series of discrete mitigation, just transition and adaptation plans.

As mentioned above, we recommend the Climate Change Chief Executives Board be assigned responsibility for implementing the NAP, as it has been assigned responsibility for implementing the ERP. Coordination between

⁷ See https://cinea.ec.europa.eu/programmes/life_en.

adaptation and the transition to a low emissions economy also needs to happen at the policymaking level, with policy analysts also working together within and across agencies to manage the risk of maladaptation.

To more effectively integrate adaptation planning into broader policy decisions, we also recommend the following:

- Government expand the Climate Impacts of Policy Assessment (CIPA) requirement to include consideration of the impacts of the policy against all three pillars of the climate response – mitigation, just transition, and adaptation. This would help to ensure that policy decisions being taken in the nearterm considers the adaptation impacts to prevent undesirable outcomes. For example, decisions on any climate adaptation measures (e.g. sea walls) need to be made while considering impacts on surrounding areas and whether they will be feasible in the long run.
- Government consider extending application of CIPA to include other Government decision-making besides legislation. This would help to avoid maladaptation and contradictions. For example, Government's decisions on urban intensity would need to be weighed against the Government's stated value of biodiversity and concerns about pluvial flooding in heavily developed areas.

4.7 Develop a national approach to adaptation financing with a clear role for the financial sector

The NAP's statements on the financial sector are very high level.⁸ When it comes to funding and financing, government should consider widening stakeholders to include private, venture and institutional capital. Capital is critical to addressing climate change, but the NAP is silent on it. We recommend the NAP provide for development of a clear national approach to adaptation financing.

Recommendation 22: Government should collaborate on that approach with key stakeholders, including banks, insurers, and relevant policymaking and regulatory agencies. This collectively agreed approach must:

- seek to quantify the overall funding and investment need over the short, medium and long-term;
- analyse the risk and return profile of investments;
- identify all available providers of capital across the private and public sector and seek to quantify the total scale of capital potentially available for adaptation;
- analyse the typical risk-return preference for different capital providers;
- match investment/funding needs with available capital;
- develop innovative funding solutions to address any gaps;
- consider policy options to mobilise different forms of available capital;
- capitalise on the international movement towards ESG investing and could consider scaling up investment through existing models, such as the MPI's Sustainable Food and Fibre Futures or through agencies like Callaghan Innovation;
- include universities and other educational institutions as stakeholders to align future capability with needs;

⁸ For example: "Banks and insurers in particular may be exposed to climate risk through their mortgage portfolios and liabilities. By investing in resilience measures or supporting customers to do the same, banks and insurers can reduce their exposure. They also have the potential to support others to fund adaptation actions, through loans or 'build back better' post-event payments" on p 17.

- consider the impact and role that the planned voluntary carbon market might have on supporting adaptation outcomes, particularly in rural sectors; and
- address how banks might assist in the funding of the many large infrastructure developments proposed, whether for adaptation or emissions reduction. There is the potential for such assets to have a lower risk weighting or some other mechanism to make funding more attractive, particularly for less well-developed technologies (e.g. geothermal direct contact condensers or hydrogen).

While financial sector capital can be leveraged for adaptation, the lack of a clear and quantifiable financial return makes adaptation a more challenging proposition for mainstream banks and investors compared to decarbonisation. We anticipate Government playing a bigger role in funding adaptation than decarbonisation, and the use or allocation of ETS funds should be optimized in light of this.

Recommendation 23: To that end, we recommend:

- the Climate Emergency Response Fund (CERF) be expanded to also fund measures to support adaptation (see action SW3).
- Investment in risk management and managed retreat should be balanced with funding for innovation and research and development to reduce high-value industries' vulnerability and enhance their resilience. This will require sector-specific approaches. For the agriculture sector, for example, that could include funding to support the development and adoption of new technologies, land management methods, and new breeds or cultivars that promote and enable greater resilience in primary industries.

Recommendation 24: That the adaptation financing approach take into account a broader notion of resilience, as incorporated in the climate-related disclosures regime. 'Resilience' includes both adaptation and mitigation, particularly given the greater focus to-date on resilience through climate mitigation measures (e.g. renewable energy financing and other lower-emitting initiatives for transport and buildings). We recommend the NAP:

- include, as appropriate, the recommendations of the Sustainable Finance Forum's 2030 Roadmap. This Roadmap was developed by the Circle's Sustainable Finance Forum (SFF). Chapter 9, in particular, describes Government's role in transforming the financial system to deliver on environmental, social and economic outcomes. We urge government to work alongside the Centre for Sustainable Finance (Toitū Tahua) to ensure that the relevant parts of the Roadmap are translated into adaptation policy.
- consider various financial products, partnerships, and approaches to enhance resilience:
 - Support nature-based adaptation solutions through public-private partnerships (e.g. banksupported blue economy projects).⁹ Nature-based solutions may include proving grounds or pilots for certain approaches and instruments. There's an opportunity to explore incubator and proof of concept partnerships further, which would support Government's implementation of the NAP and ERP.
 - Support biodiversity protection and climate-resilient ecosystems through public-private partnership to value biodiversity credits.
 - Structure more green loans or green bonds that address these categories, as identified in the green loan and green bond principles.

⁹ See https://blogs.worldbank.org/climatechange/protecting-oceans-climate-change-impacts.

5. Providing an enabling environment and incentives for an effective adaptation response

Key recommendations

- Provide short-term direction to local authorities, including on managed retreat
- Provide immediate voluntary actions for infrastructure and planning resilience
- Approach any flood insurance policy as a targeted intervention within a wider flood management strategy

To address New Zealand's likely adaptation reality, the policy response to climate change adaptation needs to have features of both an enabling environment for change, and an ongoing crisis response.

The NAP's three focus areas do not adequately address the market incentives, technological changes, and behavioural changes needed for meaningful climate change adaptation. This section contains recommendations for the NAP to provide more specific actions around market incentives, technological changes, and behaviour change.

5.1 Provide short-term direction to local authorities, including on managed retreat

Immediate action is required now to prevent maladaptation – which the National Climate Change Risk Assessment identified as one of New Zealand's most significant risks – and to seize opportunities to enhance adaptive capacity.

Many adaptation issues (including managed retreat) will fall across local and regional government boundaries. This will mean that local/regional entities will need to work together to solve them, and in certain circumstances there will be a role for central government. This will be particularly the case when the solutions exceed the mandate and/or funding capacity of the local/regional government agencies.

Central and local government need to start working now on how they will fund actions that exceed the ability of local government. And, as is the case across all of the NAP, the private sector will have a role here too.

Central government can also play a role in the immediate term by supporting local government with short-term national policy direction, which will help to address the risk of maladaptation. RM reform, including the Climate Adaptation Act, may be passed in the next 1-2 years. But processes of implementing the legislation within each region – through regional spatial strategies and natural and built environment plans – will take a long time. Many councils are understandably reluctant to discuss the difficult topic of managed retreat. This will likely continue until there is legislation in place to remove existing barriers. By the time the legislation is implemented through regional spatial plans, many opportunities for effective adaptation will already have been lost.

Although adaptation issues that are local and should be dealt with locally, central government can play a role in the interim by providing greater support to local government. Centralised oversight would be preferred to

allowing each council to act independently. Independent action risks significant differences between councils and could lead to reputational risks for banks' lending across multiple councils where customers are subjected to different rules.

Recommendation 25: We recommend the NAP include a short-term critical action of requiring all local authority decision-making around infrastructure investment to include express consideration of adaptation, including managed retreat and climate risks, together with tangible targets to be achieved. These targets should be linked to New Zealand's national adaptation targets as described above under the heading *Provide for national adaptation targets and central accountability for progress.*

- more details about the support government will make available to local government to facilitate managed retreat discussions with communities.
- a clear process of how to assess different adaptation options that aligns with the vision and goals of the NAP, which stakeholders and local government can use immediately
- clear roles for specific local government stakeholders for each action, requiring a consistent approach to be taken across regions.

5.2 Provide immediate voluntary actions for infrastructure and planning resilience

Because the NAP includes actions that are critical but are years away from starting or from making a difference on the ground, we recommend the NAP more urgently provide direction on voluntary policy options that will support effective adaptation. As much as possible this should be completed in parallel to ensure that, once the RM reform process is completed, other policies are ready.

Decisions that may lock in undesirable or maladaptive effects are being made now. There are many organisations and sectors who are willing and motivated to make changes now to enhance resilience; they just need additional guidance to do so. A series of voluntary actions in the NAP that could be taken immediately can guide decision making while more enduring processes are developed through the various programmes identified in the NAP (including the reforms processes).

For example, the draft NAP has an action to draft a resilience code for infrastructure (I3). This action has a timeframe of 2024 by which 'advice on the best way forward will be complete'. That timeframe will result in another two years of lost potential for maximising adaptation.

Recommendation 26: We recommend a voluntary resilience standard for infrastructure should be provided now whilst scoping investigations are undertaken. Voluntary guidance will allow a clear problem definition to be developed and the right regulatory approach identified, which takes into account the existing regulatory environment and the highly variable physical infrastructure, the mix of public and private funding and decision-making, and bespoke regulatory environments across New Zealand's infrastructure providers. This discussion should be progresses as a matter of urgency between central and local Government and infrastructure providers.

5.3 Approach any flood insurance policy as a targeted intervention within a wider flood management strategy

We note that the policy proposals directly relate to issues resulting from flooding. We question whether the policy proposals will be extended to broader issues that will also require urgent action, including coastal erosion, slippage, among others.

Recommendation 27: That the NAP provide more urgent information on insurance and better acknowledge the implications of insurance retreat. A sudden withdrawal of insurance would most likely lead to significant market distortions, a disorderly transition to risk-adjusted asset values and – at worse – could disrupt legislative processes as affected asset owners seek to recover from sudden wealth losses. Although the NAP includes an action for Treasury and the Earthquake Commission to "*Develop options for home flood insurance issues*" (EF2), the NAP also needs to expressly commit to working with insurers, banks, and developers on a national approach.

For flood risk, which is specifically addressed by the NAP, the approach should take into account the following market realities, as advised by our members:

- Flood risk is concentrated in New Zealand. Flooding has a range of impacts, and not just financial ones. Flood impacts are best reduced through avoidance and protection (e.g. flood protection infrastructure investment).
- Currently, the vast majority of NZ homes (95%+) are insured for flood damage.
- A potential shift to the risk-based pricing of flooding insurance is possible in the future. But it has not occurred yet, and it is unlikely to in the next few years. Concern about imminent and significant changes in the availability/affordability of insurance for flooding is not justified at this stage. It would, however, be appropriate to continue to monitor the situation.

Recommendation 28: If a flood insurance-related policy intervention was to be developed in future, then we recommend it be part of a wider flood management strategy.

Direction on insurance should focus on deferring inevitable financial impacts from insurance retreat, not seeking to eliminate those indefinitely. This is to avoid moral hazards from undue risk taking, limit escalating fiscal liability and ensure markets can orderly transition into an environment where physical climate risks are sufficiently accounted for and asset-values adjusted.

Recommendation 29: We therefore recommend as a starting point that any flood insurance-related policy be targeted to need and to river and surface flooding, timebound, and limited to existing homes to avoid moral hazard. It should be designed so as to manage the impacts on homeowners not exposed to flooding, have benefits that outweigh the costs, and be practical to implement.

6. Providing data, information, and guidance to support an effective adaptation response

Key recommendations

- Establish a centralised climate risk database
- Provide stakeholder education and awareness raising on adaptation
- Focus Government-backed climate research on practical enablers of adaptation

This theme relates to the NAP's second focus area: *provide data, information, tools and guidance to allow everyone to assess and reduce their own climate risks*. The draft NAP describes several promising data-, information- and guidance-related actions. We recognise the uncertain and evolving nature of information and data on long term climate trends and the issues that currently arise from limited access to scalable data. Besides data and tools, further education and awareness on adaptation is needed.

Recommendation 30: For many stakeholders, including in the private sector, planning and preparedness to adapt to the impacts of climate change is variable and practice is emerging. To assist capability building for an effective adaptation response, we recommend the NAP provide for stakeholder education and awareness as well as information, resources, and tools to help stakeholders adapt to climate change. Included in the education and awareness action should be a clear requirement for how data can be applied locally and what the limitations are to its use.

6.1 Establish a centralised climate risk database

The Bank of England (CBE) has published the results of the Climate Biennial Exploratory Scenario (CBES), which explores the financial risks posed by climate change for the largest banks and insurers operating in the United Kingdom. The CBE noted that data availability and quality was a key limiting factor in obtaining an accurate picture of future scenarios. This is an area in which New Zealand has performed poorly to date and it is holding us back from a coordinated, effective adaptation response. Given the limitations of inland flooding data in New Zealand, this should be addressed urgently, with results also made publicly available. Climate data needs to be more widely available, rather than being closely held by Crown Research Institutes.

Recommendation 31: That Government consider providing a national data library with up-to-date consistent regional information across all of New Zealand. Accessing current climate data through a centralised 'Adaptation Information Portal' will enable businesses to assess and manage climate risks more efficiently and effectively with a level playing field.

Recommendation 32: That such a Portal should:

- be regularly updated and transparent in its inputs, so the private sector can play its part in achieving the objectives that have been set.
- provide data in a form that is easily assimilated into software applications held by many businesses and local government, such as ARCGIS.

• Be well-advertised and accessible to all New Zealanders.

Recommendation 33: We recommend that data in the portal should:

- Include NIWA's current climate change data (based on AR5 and RCP scenarios), updated to the data sets NIWA is developing based on the more recent AR6 scenarios when available.
- Include other data required for emissions reporting/modelling for Climate Reporting Entities to facilitate quality reporting. This would include data on: building energy use (residential and commercial, actual and averages by building type and across different regions); emissions (from companies covered by the NZ ETS); agricultural data under He Waka Eke Noa; a national register of commercial building emissions (as per Australia's); emissions factors.
- be useable at a local level. To inform decision-making councils and local governments will need decision-useful data.
- be fit-for-purpose, location specific and covering issues such as changes in pasture production, fire risk, pest and disease incidence is important

Recommendation 34: We recommend looking to international models for databases that have operated successfully. For example, the Australian Cross Dependency Model is a climate risk database and tool that delivers on-demand asset level physical risk analysis from present day through 2100. It helps asset owners to accurately assess climate change risks and cost of climate change impacts to an existing or planned asset.

6.2 Provide stakeholder education and awareness raising on adaptation

Recommendation 35: We recommend several additional actions in the NAP regarding education and increased awareness, in addition to information, resources, and tools. SBC and CLC would be open to pursuing these initiatives in partnership with government. To that effect, we recommend that the first NAP must:

- take action to help to educate stakeholders about adaptation. The draft NAP assumes a high level of adaptation literacy and knowledge among stakeholders. Although many of SBC's and CLC's member organisations are already taking action to mitigate their contributions to climate change by reducing their greenhouse gas emissions, the collective conversation between our members on adaptation is still in its early stages. Similarly, there is a long way to go in raising awareness within communities and organisations of the potential impacts of climate change – and that some impacts are locked in no matter how much we reduce emissions or slow rising global temperatures.
- expand the ERP's Climate Information Centre to provide adaptation-related information. The Emissions Reduction Plan contains a set of actions aimed at informed public participation, including a Climate Information Centre that provides a trusted source of information to promote and socialise the widescale behaviour changes needed for the transition.
- raise community and stakeholder awareness of the gradual changes and potential impacts and what actions they can take proactively to reduce risks (rather than to merely respond to them). While we support the inclusion of the action to incorporate climate change curricula into teaching and learning programmes, a critical action should be to focus Government on raising awareness in the community and providing information on preparing for climate related natural hazards. Government should emphasise that climate change is a gradual process that can still have significant impacts.

 amend the NAP's action from "Raise awareness of climate-related hazards and how to prepare" to be more about awareness to reducing climate impacts and emergencies in the first place, rather than to respond to them after they occur.

6.3 Focus Government-backed climate research on practical enablers of adaptation

The Deep South National Science Challenge's research strategy identifies areas that need further research to inform adaptation planning. However, the need to balance the gathering of information must be balanced with the need to act now in the face of uncertainty.

Recommendation 36: We therefore recommend any national research strategy should be clear on how the information will be used, in a practical way, to enable adaptation broadly. Government-funded research should clearly relate to practical change on the ground. Any Government research strategies should have clear outcomes and provide confidence that the research will widely be useful. The NAP should also be clear on how the findings of the research strategy will be provided to communities and stakeholders in a way that they can use to inform their understanding and adaptation planning. SBC and CLC would be happy to discuss the detail of this recommendation further with relevant agencies, if helpful.

About Sustainable Business Council

The Sustainable Business Council (SBC) is a CEO-led membership organisation with more than 120 businesses from all sectors, ambitious for a sustainable New Zealand. Members represent more than \$111 billion–of collective turnover, 34 per cent of GDP, and nearly 180,000 full-time jobs. Our network gives members the ability to take large-scale collective action. SBC is part of the BusinessNZ network and is the New Zealand Global Network partner to the World Business Council for Sustainable Development. www.sbc.org.nz/about/our-members/sbc-members

About Climate Leaders Coalition

The Climate Leaders Coalition (CLC) was launched in July 2018 with 60 original signatories to promote business leadership and collective action on climate change. With now over 100 signatories, they account for almost 60 per cent of New Zealand's gross emissions, \$122 billion of collective turnover, around 38% of GDP, and employ over 220,000 people. Signatory commitments include measuring and publicly reporting their greenhouse gas emissions, setting a public emissions reduction target, and working with suppliers to reduce their emissions. https://www.climateleaderscoalition.org.nz/who

Appendix: full list of recommendations

Providing an enduring platform and collaboration				
Key recommendation	Detailed recommendations			
Commit to genuine, ongoing partnership on New Zealand's adaptation response	 Recommendation 1: That the NAP include an express, ongoing role for businesses and other stakeholders in developing and implementing New Zealand's adaptation response. Recommendation 2: That a specific action be included in the NAP around working with the private sector to draw on adaptation insights from business and local government, directing guidance where it is needed most Recommendation 2: That an approach similar to the MfE lod process around biodiversity incentives he considered for 			
	Recommendation 3: That an approach similar to the MfE-led process around biodiversity incentives be considered for adaptation issues.			
	Recommendation 4: That the NAP recognise the role of stakeholders in the following specific ways:			
	 Include in the NAP's summary of Actions in Appendix 3 an additional column with roles and key stakeholders, including businesses and local authorities. Include in Appendix 4: Roles and responsibilities for adaptation key stakeholders and their roles as they relate to each action in Appendix 3 to make it clear to businesses reading the NAP where they fit in. Include an action committing the Government to include stakeholders in a meaningful process that helps to inform the Climate Change Commission's biannual progress reports on the NAP. 			
Establish an Adaptation Technical Advisory Group	Recommendation 5: Establish an Adaptation Technical Advisory Group to enable ongoing consultation. This Adaptation Technical Advisory Group should include businesses but have a diverse range of other stakeholders (in addition to central government).			
Establish an enduring National	Recommendation 6: Create a National Adaptation Framework to provide an enduring platform over successive Plans.			
Adaptation Framework that goes beyond a six-year timeframe	Recommendation 7: The National Adaptation Framework should be developed in true partnership with businesses and other stakeholders, in acknowledgement of the important role these parties will play over the longer term in achieving the vision.			
	Recommendation 8: That the National Adaptation Framework provide a clear process for the preparation of future NAPs and how actions in successive NAPs should be prioritised based on the assessment of progress against indicators or other measures.			

	Recommendation 9: That the National Adaptation Framework includes adaptation targets and indicators.
Provide for national adaptation targets and indicators, and central	Recommendation 10: That the Government further research what New Zealand can do based on successful adaptation responses internationally.
accountability for progress	Recommendation 11: That clear adaptation targets and indicators be established for New Zealand.
	Recommendation 12: That the National Adaptation Framework provide targets setting targets and timeframes for reductions of a quantifiable percentage of priority risks from climate change.
	Recommendation 13: That a similar approach to the new CLC adaptation commitments be explored at a national and/or local policy level.
	Recommendation 14: That a National Adaptation Framework provides indicators against which progress can be measured.
	Recommendation 15: That New Zealand's adaptation indicators be adopted from international examples and aligned with the National Climate Change Risk Assessment's priority risks.
	Recommendation 16: A requirement for a public response from the Government of the day to the Climate Change Commission's progress report be included in the final NAP, so that these biannual progress reports are meaningful and result in course corrections, where needed.
	Recommendation 17: That one entity, such as MfE, be primarily accountable for the NAP and responsible for responding to the Climate Change Commission's progress reports.
	Recommendation 18: That budget and resources are dedicated to building and embedding climate change (adaptation and mitigation) expertise into and across government departments.
Establish early and ongoing engagement on managed retreat,	Recommendation 19: That an exposure draft of the Climate Adaptation Bill is released prior to its introduction to Parliament.
including on risk, costs, and responsibilities	Recommendation 20: To inform development of the Climate Adaptation Act, we recommend government look to international examples on funding of climate change adaptation.
Align NAPs with other relevant policies, including Emissions Reduction Plans	Recommendation 21: That Government provide a clear and transparent explanation and ongoing process for coordination so that this and future NAPs remain aligned with New Zealand's first and successive ERPs and other relevant policies.
Develop a national approach to adaptation financing with a clear role	Recommendation 22: That Government collaborate on a national adaptation financing approach with key stakeholders, including banks, insurers, and relevant policymaking and regulatory agencies.
for the financial sector	Recommendation 23: We recommend:
	 the Climate Emergency Response Fund (CERF) be expanded to also fund measures to support adaptation (see action SW3).

	 Investment in risk management and managed retreat should be balanced with funding for innovation and research and development to reduce high-value industries' vulnerability and enhance their resilience.
	Recommendation 24: That the adaptation financing approach take into account a broader notion of resilience, as incorporated in the climate-related disclosures regime. We recommend that the NAP:
	 include, as appropriate, the recommendations of the Sustainable Finance Forum's 2030 Roadmap. consider various financial products, partnerships, and approaches to enhance resilience: Support nature-based adaptation solutions through public-private partnerships (e.g. bank-supported blue economy projects).
	 Support biodiversity protection and climate-resilient ecosystems through public-private partnership to value biodiversity credits.
	 Structure more green loans or green bonds that address these categories, as identified in the green loan and green bond principles.
Providing an enabling environment and	incentives for an effective adaptation response
Key recommendation	Detailed recommendations
Provide short-term direction to local authorities, including on managed retreat	Recommendation 25: We recommend the NAP include a short-term critical action of requiring all local authority decision- making around infrastructure investment to include express consideration of adaptation, including managed retreat and climate risks, together with tangible targets to be achieved.
	• more details about the support government will make available to local government to facilitate managed retreat discussions with communities.
	• a clear process of how to assess different adaptation options that aligns with the vision and goals of the NAP, which stakeholders and local government can use immediately
	 clear roles for specific local government stakeholders for each action, requiring a consistent approach to be taken across regions.
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Establish a centralised climate risk database	Recommendation 31: That Government consider providing a national data library – or 'Adaptation Information Portal' – with up-to-date consistent regional information across all of New Zealand.
	Recommendation 32: That such a Portal should:
	• be regularly updated and transparent in its inputs, so the private sector can play its part in achieving the objectives that have been set.
	 provide data in a form that is easily assimilated into software applications held by many businesses and local government, such as ARCGIS.
	be well-advertised and accessible to all New Zealanders.
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	• be useable at a local level. To inform decision-making councils and local governments will need decision-useful data.

	 be fit-for-purpose, location specific and covering issues such as changes in pasture production, fire risk, pest and disease incidence is important. Recommendation 34: We recommend looking to international models for databases that have operated successfully.
Provide stakeholder education and awareness raising on adaptation	Recommendation 35: We recommend several additional actions in the NAP regarding education and increased awareness, in addition to information, resources, and tools:
	 take action to help to educate stakeholders about adaptation. expand the ERP's Climate Information Centre to provide adaptation-related information. raise community and stakeholder awareness of the gradual changes and potential impacts and what actions they can take proactively to reduce risks (rather than to merely respond to them). • amend the NAP's action from "Raise awareness of climate-related hazards and how to prepare" to be more about awareness to reducing climate impacts and emergencies in the first place, rather than to respond to them after they occur.
Focus Government-backed climate research on practical enablers of adaptation	Recommendation 36: We recommend any national research strategy should be clear on how the information will be used, in a practical way, to enable adaptation broadly.

