Forest & Bird

TE REO O TE TAIAO | *Giving Nature a Voice*

Submission on the draft Te mahere urutaunga a-motu (tuhinga hukihuki) Adaptation Plan

To **Ministry for the Environment**

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Protection of the forest and soil mantle to prevent the movement of debris into stream systems with consequent stream aggradation, flooding and loss of water quality should be the first aim in all indigenous State forest areas.

Management Policy for New Zealand's Indigenous State Forests 1977

Every New Zealand citizen is urged to look deeply into the matter of efficiently preserving our Forests and Birds. It will be found that the necessity is immediate and essential to our very existence as a people. Already the effects of their destruction is apparent to the observant, in the changing climate, decreasing fertility, erosion...

... The timber value of our forests is not the most important side of the utility of our forests... the climatic effects of forests and prevention of erosion are the more important.

NZ Native Bird Protection Society pamphlet (1920s)

Summary of Forest & Bird's submission

Forest & Bird is actively improving New Zealand's resilience through nature-based projects across New Zealand. These projects are being delivered nationally through the national organisation and also locally by the work of nearly 50 member-led branches.

Forest & Bird's submission reflects the decision in the Emissions Reduction Plan that

> *Where possible, nature-based solutions are prioritised in policy, planning design and decision-making over solutions that do not enhance nature. This will be for both carbon sequestration and climate change adaptation.*

The draft Adaptation Plan will need to be strengthened to give effect to this decision; across each element of the Plan the Government should weigh up whether sufficient weight has been given to nature-based solutions in each of the proposed actions.

Forest & Bird and its predecessor the NZ Native Bird Protection Society has been advocating for nature-based solutions to natural hazards for nearly a century.

In a number of areas there may need to be a rethink of the design of individual programmes, for example those relating to river protection works, the functions of local government and the legislative reform agenda (especially fisheries, resource management, local government and three waters).

The key role of infrastructure agencies and local government needs to be considered in the drive for nature-based solutions because of the role they play in either proactively responding to natural hazards or needing to protect infrastructure from natural hazards, which will be exacerbated by climate change.

A mountains-to-sea approach needs to be applied to nature-based solutions. Some nature-based solutions such as forest and wetland restoration may be located at significant distance from the at-risk people and assets that these solutions seek to protect. For example, much of the South Island's West Coast settlements and infrastructure are protected by public conservation land that extends to the Main Divide of the Southern Alps.

New Zealand's unique ecology and its consequential vulnerability to mammalian pests needs to be considered when considering nature-based solutions. Without widespread national control of mammalian browsers, the Government's intention to deploy nature-based solutions to protect people and assets from harm is likely to frustrated by disruptions to ecological processes that are necessary to maintain and re-establish natural ecosystems that protect people and assets from harm. The centrality of pest control to success also extends to broader biosecurity which should be seen as a linchpin of New Zealand's adaptation response.

After the phase of forest clearance by European colonists, much of New Zealand's public conservation land was originally protected for soil and water conservation after settlers began to experience the damaging impacts of widespread forest clearance. This was one of Forest & Bird's earliest campaigns. Now as climate change means increased threats to people, assets and property from extreme weather events, New Zealand needs to reclaim the thinking that saw large areas of land protected, only now we need to consider wetlands and coastal ecosystems as well as forested mountainsides.

Introducing Forest & Bird

The Royal Forest & Bird Protection Society (Forest & Bird) is New Zealand's largest and longest-serving independent conservation organisation. Our mission is to be a voice for nature – on land, in the sea, and in our fresh waters.

Forest & Bird's constitutional purpose is to *"take all reasonable steps within the power of the Society for the preservation and protection of the indigenous flora and fauna and the natural features of New Zealand."*

We are a registered charity, with our funding coming primarily from members and supporters; we receive government grants only for specific practical projects. Our nearly 50 volunteer branches throughout New Zealand work on the ground to restore nature through activities such as running pest control programmes, native plant nurseries, field trips, and public talks.

With hundreds of projects operating at a variety of geographic scales, our portfolio of conservation projects is the largest of any single NGO in New Zealand. Through our Kiwi Conservation Club | Hakuturi Toa (KCC), we engage children and their families, inspiring them to enjoy, understand, and love the natural environment and to care for it. We have more than 5000 children in KCC, and many ex-KCC members have gone on to establish science and conservation careers.

Forest & Bird Youth is a national network of 14–25-year-olds who are acting for nature as youth for youth. They are actively organising practical projects, lobbying MPs and Ministers, and running digital campaigns. In the recent general election, they assessed the policies of the political parties. During the short time it has been in operation, Forest & Bird Youth has already attracted 500 members and supporters, and it is growing.

Forest & Bird campaigns at national and local level, advocating for pro-nature policy development and law reform, and representing nature in the Environment Court, at Environmental Protection Authority boards of inquiry, and in council planning processes. Nearly a century after establishment, we are still working just as hard for the protection and restoration of our wildlife and wild places on land, in freshwater, and at sea.

Our strategic priorities

In 2019, Forest & Bird adopted a new Strategic Plan with a purpose of protecting and restoring nature in a climate crisis. We have adopted goals in five domains:

- ·Climate safety – Ensuring our country does everything we can to keep the climate safe for all life on earth. Mitigating the impact of climate change will be at the heart of everything we do.

- Economy that supports nature – Encouraging communities to appreciate nature for its intrinsic and life-giving values. Recognising our long-term economy is dependent on a healthy environment.

- Vibrant landscapes – Advocating for stable healthy ecosystems full of native animals and plants.

- Energised water, rivers, and wetlands – Ensuring our rivers and streams run clean, are healthy, and are teeming with life.

- Oceans alive – protecting and restoring marine life and ecosystems

An effective Government adaptation response that places nature at its heart will help Forest & Bird make progress in all five domains.

Attachments to this submission

This submission should be read in conjunction with the following attachments:

- The Forest & Bird Youth submission
- List of nature-based solutions to risks identified in the National Climate Change Risk Assessment
- Forest & Bird briefing on improving pest control
- Forest & Bird (and others) briefing on wetland protection and restoration

Adaptation and Forest & Bird

Forest & Bird was a strong advocate for the Zero Carbon Act and the development of a National Adaptation Plan. Nature can help us adapt to climate change but only if we also protect nature. Through Forest & Bird's practical projects we are adapting to climate change and helping build resilience.

Forest & Bird branches are helping New Zealand build resilience

Forest and Bird members are operating a diverse range of local branch projects that are helping build resilience. These projects include:

- Ashburton branch is building resilience through wetland restoration and by pest trapping in coastal areas near the Ashburton River mouth.
- Central Hawkes Bay Branch is protecting water quality by restoring forest in a Scenic Reserve.
- Central Otago Branch is helping forests in the Upper Clutha catchment become more resilient through trapping in multiple locations and supporting research into rats through citizen science.
- Dunedin branch is helping build forest resilience in coastal Otago through an aviary for rehabilitation and release of kereru, a keystone seed dispersal and assisting with forest protection in Forest & Bird's Lenz Reserve.
- Eastern Bay of Plenty Branch is helping build coastal resilience in the Whakatane estuary with native replanting and pest control and is building native forest resilience through weed control at multiple sites and by running a native plant nursery.
- Far North Branch is helping to restore stream margins and native forest by propagating native plants for restoration projects.
- Gisborne branch is building forest resilience with more than a decade of pest trapping in a local reserve.

- Golden Bay branch is building resilience through wetland restoration and pest trapping in coastal habitats to protect threatened birds.
- Hauraki Islands branch is building resilience by pest trapping (rat and stoat free) and by clearing weeds and replanting natives in forest reserves.
- Hibiscus Coast branch is building coastal resilience through restoration projects and is running community weed control workshops.
- Horowhenua Branch is building resilience through wetland restoration.
- Lower Hutt Branch is building resilience through building an ecological corridor linking the forests of the eastern and western hills of the Hutt Valley and by propagating native plants in a nursery.
- Marlborough Branch is building resilience by advocating for better coastal management.
- Napier branch is building resilience by fencing deer out of a scenic reserve to protect the forest within it and by undertaking wetland restoration.
- Hastings-Havelock and Napier branches are increasing carbon sequestration, improving water quality, and increasing resilience of native species to climate change by restoring wetlands and estuaries.
- Nelson-Tasman branch is helping build resilience through coastal habitat restoration.
- North Canterbury branch is building resilience through pest trapping in mountain forests and through coastal habitat restoration.
- North Shore branch is building resilience through urban stream and wetland restoration.
- North Taranaki branch is building resilience through wetland, freshwater and forest protection and restoration, including pest control.
- Northern branch is building resilience by distributing 37000 native trees to district ratepayers.
- Rangitikei branch is building resilience by protecting and managing five reserves.
- Rotorua branch is building resilience with pest control and native forest planting.
- South Auckland branch is building resilience by helping establish an ecological corridor across South Auckland, native tree planting and locally sourcing seed.
- South Canterbury branch is building resilience by protecting rare lowland forest and restoring a river margin.
- South Otago branch is building resilience by protecting coastal forest, running three native plant nurseries and educating people about climate change.
- Southland branch is building resilience by protecting coastal habitat, including the nesting habitat of climate vulnerable hoiho.

- Tauranga branch is building resilience by protecting and restoring hill country forest and by educating the public.

- Te Puke branch builds resilience by providing native seedlings for planting.

- Upper Coromandel branch is building resilience by restoring and protecting coastal forest.

- Upper Hutt branch is building resilience through pest and weed control and replanting degraded river margins.

- Waikato branch is building resilience through pest control and planting in hill country.

- Wairarapa branch is building resilience through wetland restoration and by supply pest traps for forest protection.

- Waitakere branch is building resilience through wetland restoration and pest control across the Waitakere Ranges.

- Waitaki branch is building resilience with a native plant nursery and by restoring coastal habitat.

- Warkworth Area branch is building resilience with native forest restoration and by undertaking pest control.

- Wellington branch is building resilience by coastal wetland and forest restoration.

- West Coast branch is building resilience by undertaking pest control on public conservation land near Reefton.

- Whanganui Branch is building resilience by helping restore a wetland.

Together these branches are demonstrating a range of nature-based solutions to adaptation, ranging from pest control to protect forests, replanting forests, restoring coastal wetlands to running nurseries and educating the public.

Forest & Bird's national projects are helping build resilience for people and nature

As well as these branch projects, Forest & Bird has eight large scale national projects helping to build resilience for people and nature. These projects include the Ark in the Park project protecting and restoring the Waitakere Ranges, the Bushy Park sanctuary, work to protect the nesting habitats of ecological keystone southern seabirds, the 3500ha Lenz forest reserve in Otago, an ecological corridor from Manurewa to Clevedon, pest free Hibiscus coast and protecting forested bat habitats in the Rai valley near Nelson. The pest control, ecological restoration and forest protection in these projects is helping build landscape scale resilience.

Forest & Bird is adapting to climate change

Forest & Bird has already started noticing the impacts of climate change on its projects and is in the process of developing a framework for assessing the climate risks to its restoration projects. Examples of the kinds of challenges the organisation is already facing includes:

- Reductions in access to areas for trapping and other volunteer conservation work because of greater wasp densities

- Increased damage to tracks used to access areas for practical conservation work
- Direct damage to predator and pest exclusion fences creating opportunities for pest reinvasion
- Risks to food availability for native animals in Forest & Bird reserves because of drought
- Increased rainfall in kauri forest creating increased risk of kauri dieback disease spread

In the medium to longer term these problems will become more frequent and acute and will be accentuated for coastal projects due to the sea-level rise.

A further exacerbation is the lack of adequate Government browsing and other pest control that is imposing increased costs on Forest & Bird and adding to the vulnerability of its own reserves and the places Forest & Bird is helping to protect and manage.

Response to specific questions in the consultation document

General questions

1. **Climate change is already impacting New Zealanders. Some examples include extreme weather events such as storms, heatwaves and heavy rainfall which affects lives, livelihoods, health and wellbeing, ecosystems and species, economic, social and cultural assets, services (including ecosystem services) and infrastructure. How is climate change impacting you? This could be within your community and/or hapū and iwi, and/or your business/organisation, and/or your region.**

   See the comments above

2. **The national adaptation plan focuses on three key areas (institutional reform; information and guidance and embedding climate resilience and risk across strategies and proposals. Please indicate which area is most important for you.**

   These three focus areas work together and are important; government needs to apply a systems approach. However, individual change (focus area 2) must be supported by effective Government systems and so is dependent on effective delivery of focus areas one and three. For example, Forest & Bird's reserve management is less able to become resilient if resources are diverted into controlling pests that are reinvading from public land. Without law on managed retreat individuals, firms and local government will struggle to adapt to increased risks. Unless law, systems and strategies are modified to give priority to nature-based solutions in accordance with the Emissions Reduction Plan then planners and decision makers won't prioritise nature-based solutions.

   Focus area 3 provides greatest opportunity for co-benefits. Embedding climate resilience across government will increase the focus on its importance and allow people to realise and experience the co-benefits from adaptation initiatives such as utilising nature-based solutions. If the Government embeds climate resilience, then institutions will move to become more 'climate fit' (focus area 1) and they will be more likely to consider climate change implications and share that information with others (focus are 3). This will then create a positive feedback loop.

3. **We all have a role to play in building resilience to climate change, but some New Zealanders may be more affected and less able to respond. There is a risk that climate change could exacerbate existing inequities for different groups in society. Appendix 3 sets out the full list of actions in this national adaptation plan.**

   a. **What are the key actions that are essential to help you adapt? Please list them.**

   Along with greater government investment in pest control, forest protection and restoration, coastal restoration, wetland protection and restoration, and 'making room for rivers', the following actions in the draft plan will help Forest & Bird and the values it represents to adapt:

- SW1 – Reform the resource management system
- SW1 – Pass legislation to support managed retreat
- SW1 – The future for local government review
- SW1 – Establish central government oversight and coordination for implementing the national adaptation plan
- SW2 – Provide access to the latest climate projections data
- SW3 – Produce adaptation guidance for central government policy makers
- SW3 – Regularly update adaptation guidance for local government
- SW3 – Regularly update the guide to local climate change risk assessments
- NE1 – Implement the DOC climate change adaptation action plan (CCAAP)
- NE1 – Implement the proposed National Policy Statement on Indigenous Biodiversity (NPS IB)
- NE2 – Prevent the spread of wilding conifers, and contain or eradicate established areas of wilding conifers by 2030
- NE1 – Deliver Jobs for Nature to restore indigenous ecosystems
- NE1 – Implement the National Policy Statement for Freshwater Management 2020 (NPSFM)
- NE1 – Implement the Revitalising the Gulf: Government Action on Sea Change plan
- NE1 – Implement the South-east Marine Protection Initiative
- NE1 – Implement the Sustainable Land Management Hill Country Erosion Programme
- NE1 – Prioritise nature-based solutions and implement Te Mana o te Taio – Aotearoa New Zealand Biodiversity Strategy 2020 (ANZBS)
- NE3 – Establish an integrated work programme to deliver climate, biodiversity and wider environmental outcomes
- HBP1 – Integrate nature-based solutions into the urban environment
- I2 – Progress the rail network investment programme
- I3 – Invest in public transport and active transport
- C1 – Strengthen teaching and learning related to climate change
- EF1 – Deliver the fisheries system reform
- EF1 – Implement the Government response to the Prime Minister's Chief Science Advisor's report on commercial fishing

In implementing these priorities consideration should be given to the following:

- Current reform of fisheries legislation does not factor in climate change and so the next round of fisheries legislation will need to address this to enable the fisheries management system to more adequately respond to climate change risks.
- Current proposed browsing pest control (deer, goats, possums, chamois and tahr), while welcome, is unlikely to be sufficient to deliver climate change goals and may maintain pest animal numbers at levels that frustrate government attempts to extend land stabilisation and carbon storage initiatives or might substantially increase the cost of land stabilisation initiatives.

b. **Which actions do you consider to be most urgent? Please list them.**

Reforming Government systems, including law, strategies and programmes

- SW1 – Reform the resource management system, including by the inclusion of a priority for nature-based solutions
- SW1 – Pass legislation to support managed retreat, including a priority or nature-based solutions

- NE1 – Implement the proposed National Policy Statement on Indigenous Biodiversity (NPS IB)
- NE1 – Deliver Jobs for Nature to restore indigenous ecosystems, ensuring that it meets both climate and biodiversity objectives
- NE1 – Implement the National Policy Statement for Freshwater Management 2020 (NPSFM)
- NE1 – Implement the Revitalising the Gulf: Government Action on Sea Change plan, including ensuring that the Fisheries Plan for the Gulf incorporates the principles of ecosystem-based fisheries management
- NE1 – Implement the South-east Marine Protection Initiative
- NE1 – Prioritise nature-based solutions and implement Te Mana o te Taio – Aotearoa New Zealand Biodiversity Strategy 2020 (ANZBS), including in the ways mentioned above
- NE3 – Establish an integrated work programme to deliver climate, biodiversity and wider environmental outcomes
- HBP1 – Integrate nature-based solutions into the urban environment
- I3 – Invest in public transport and active transport

c. **Are there any actions that would help ensure that existing inequities are not exacerbated? Please list them.**

All greenhouse gas emitters to directly contribute to the cost of adaptation on a polluter pays basis, so that the adaptation does not divert existing Crown funds from social support, health investment, conservation efforts or just transition in the Emissions Reduction Plan. This means looking outside of the ETS and the current climate change emergency response fund to raise government finance from *all* emitters, such as through a levy.

In delivering the Government's adaptation programme it will be important for all agencies and the relevant ministers to engage with environmental and social justice NGOs, including Forest & Bird, disability advocates and unions to ensure that just transitions principles are incorporated into the work in line with the Government's wellbeing priorities and emphasis on a just transition to a sustainable economy.

Changes to transport, housing and other aspects of urban living that are required as a result of adapting to climate change should ensure that they address accessibility issues at the same time to maximise co-benefits and to prevent social exclusion.

There is considerable opportunity to engage iwi Māori in governance and implementation of programmes to build resilience, particularly in deprived regions such as the North Island East Coast and the South Island West Coast where deprivation goes hand in hand with climate vulnerability.

d. **Are there any actions not included in this draft national adaptation plan that would enable you to assess your risk and help you adapt?**

Forest & Bird has developed a list of possible nature-based solutions to climate risks in the New Zealand Climate Change Risk Assessment. This is attached as an appendix to this submission. The Government should review its proposals against this list to ensure that the recommendations in the list are fully incorporated into the Adaptation Plan.

Forest & Bird will be looking to see how each of these recommendations was addressed in the final Adaptation Plan

Specific high-priority actions include:

- Developing a national programme to make 'room for rivers' to increase flood resilience while reducing risk to communities, reducing the cost of flood protection, increasing recreational opportunities and community wellbeing, and greatly improving environmental outcomes and freshwater objectives
- Increasing pest control across all public land, including all public conservation land to build resilience in natural systems and to ensure that pests on public land do not impose costs on people undertaking ecological restoration and land stabilisation activities on private land
- Developing a Wetland Restoration Plan aimed at doubling the extent of natural wetlands in New Zealand by 2050 (as per Forest & Bird's 'Every Wetland Counts' campaign asks)
- Developing a programme of coastal restoration to restore and protect coastal ecosystems across New Zealand that protect land from sea level rise, storm surges and inundation

4. **Central government cannot bear all the risks and costs of adaptation. What role do you think asset owners, banks and insurers, the private sector, local government and central government should play in:**

   . **improving resilience to the future impacts of climate change?**

   a. **sharing the costs of adaptation?**

   The costs of adaptation should primarily fall on greenhouse gas emitters on a polluter pays basis. The costs of adaptation are an externality arising from the excessive emissions of greenhouse gases. New Zealand has formally acknowledged the problem since the early 1990s and large emitters have had plenty of opportunity to reduce emissions over that time; it is reasonable that they now face the true cost of their activities.

   A secondary level of responsibility should apply to future investment decisions where those investment decisions are made in the knowledge of risk exposure. Future development within the flood plains of rivers, in areas vulnerable to sea level rise or in areas with heightened fire risks, such as the Mackenzie Basin, should bear the costs themselves, either directly or with insurance.

   Where the risks cannot be avoided because of equity issues, such as risks in relation to iwi land arising from Treaty settlements, the cost should be borne firstly by emitters and secondly by the Crown as emitters have responsibility on a polluter pays basis and the Crown has responsibility because while it pledged in 1992 to start reduce New Zealand's emissions, to date New Zealand's emissions have actually increased.

5. **The National Climate Change Risk Assessment recognised that there may be economic opportunities in adapting to a changing climate.**

   . **What opportunities do you think could exist for your community or sector?**

   Opportunities to use nature-based solutions to adapt to climate change, which will increase community wellbeing, environmental condition, resilience to climate change, and

reduce economic cost of adaptation and future impacts (for example, moving out of floodplains and providing more room for rivers is good for river habitat and riparian wetlands etc., but also significantly reduces the costs of maintaining and repairing flood protection infrastructure. It also reduces – or completely removes - the costs of 'clean-up' after a flood event, as there is much less chance of damage if people and communities are not 'in harm's way' and are therefore not impacted by high rivers flows/floods)

There are also opportunities to reduce future costs by doing things like proactively improving housing stock (e.g., making it easier to keep cool and warm, providing for and incentivising distributed solar generation, etc.), restoring wetlands, and massively increasing predator control on conservation land (which increases the resilience of our forest to future changes now, and reduces future cost to 'clean up' a bigger mess in due course).

Actions like more pest control also massively increase carbon storage of forests (which might have economic implications in due course) and increase their value for tourism, ability to hold water (which has benefits during drought), etc.

a. **What role could central government play in harnessing those opportunities?**

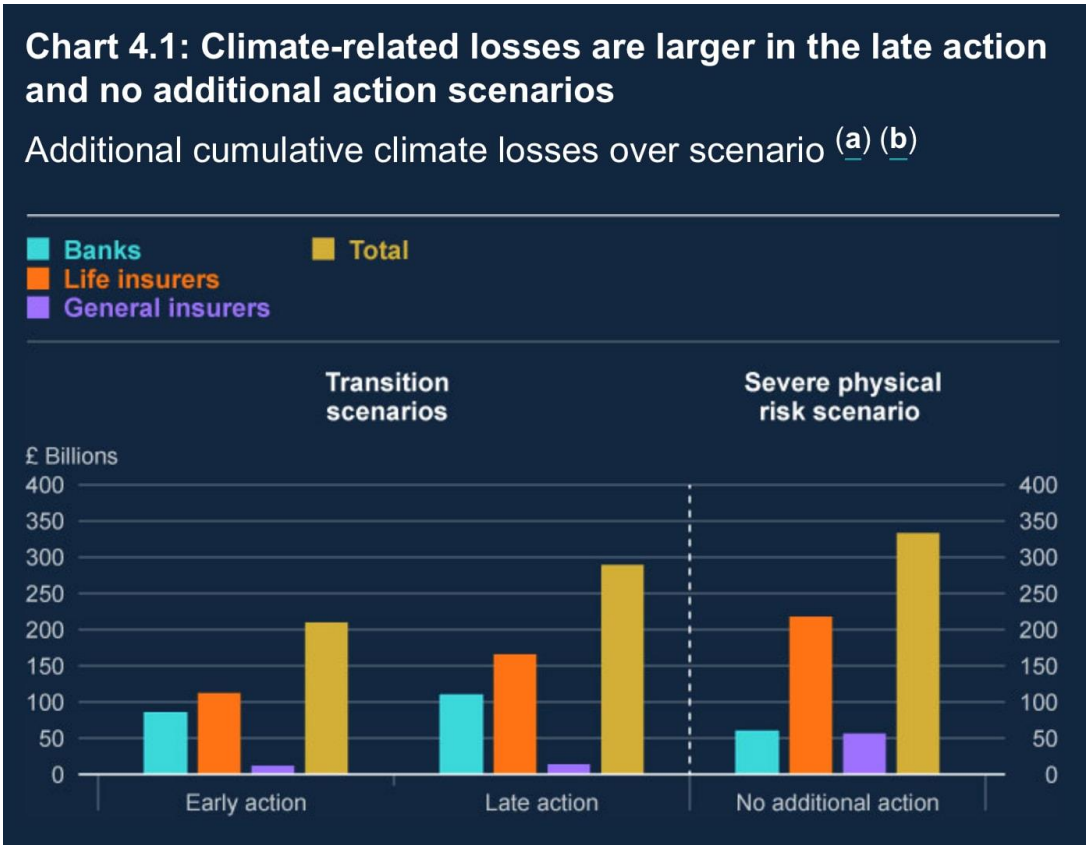
While climate change poses substantial risks to nature there are also significant opportunities for the conservation sector to increase activities that create greater resilience such as protecting, restoring and re-establishing forests and wetlands. The scale of the work required is such that this will take decades and create opportunities for employment for a significant period of time.

Government should ensure that any investment in adaptation (such as in flood protection programmes) prioritises nature-based solutions, and does not exacerbate long-term exposure to risk, as agreed by the Government in the Emissions Reduction Plan. (For example, funding an increase in stop bank heights for a town could increase the risk to that town in the long-term, because if/when the stop banks fail (when the river experiences a record-breaking high flow) the damage and casualties will be even greater than when the stop banks were smaller, because the floodwaters will have more energy, and the community was likely to have continued development behind the stop bank in the interim, rather than prioritising managed retreat. The Government would have been better to help fund the widening of the floodplain and managed retreat, thereby reducing risk to the community in the long term). This will require amendments to resource management law and the Local Government Act to drive the re-prioritisation.

Government should incentivise adaptation to climate change using nature-based solutions and could prioritise funding for communities that are looking to utilise nature-based solutions in their adaptation.

Government should invest substantially now, as the earlier you invest the greater the gains will be (and the smaller any 'costs'). In this way, it is like a financial investment – compound interest has a greater impact on future outcomes if you invest sooner. In this case, the gains of investing in nature-based climate adaptation are much greater if you invest sooner. This was affirmed recently by The Bank of England, who released its first estimates of the potential losses to banks and insurers from climate change. It estimated climate-related losses are much larger when action is delayed or not taken and are much

smaller if early action is taken (see chart below).
https://www.bankofengland.co.uk/stress-testing/2022/results-of-the-2021-climate-biennial-exploratory-scenario?utm_source=substack&utm_medium=email



System-wide actions questions

6. **Do you agree with the objectives in this chapter?**

   The system-wide actions need to explicitly prioritise nature-based solutions to give effect to the action in the Emissions Reduction Plan to "Prioritise nature-based solutions in our planning and regulatory system." This is not clear in the discussion document and needs to be made an explicit objective in reform of local government, freshwater, drinking water and wastewater management, resource management law reform and the law on managed retreat. Each of these pieces of legislation need to incorporate a nature-based solutions priority.

   Consideration also needs to be given to how to give effect to the priority for nature-based solutions in cabinet decision making and the decision making under the current Local Government Act pending legislative reform.

   A schedule matching nature-based solutions to the risks in the National Climate Change Risk Assessment has been attached to this submission.

7. **What else should guide the whole-of-government approach to help New Zealand adapt and build resilience to a changing climate?**

   Nature-based solutions should be given clear priority throughout the Government's response plans and legislation in line with decisions on the Emissions Reduction Plan.

The critical role of nationwide control of goats, deer, possums and pigs to maintain forest health, manage erosion and reduce flood and sedimentation risks should be acknowledged

The Government should look overseas to nations that are leading the way in nature-based adaptations to climate change (such as in the Netherlands, where they have a national program to manage coastal inundation and flood risk through their government 'Room for Rivers' program').

Financing of adaptation should primarily come from a levy on all greenhouse gas emitters outside of the ETS because of the significant distortions in the ETS that mean only half of emissions are presently captured and there are significant disparities in responsibility even amongst those that are in the scheme. Raising the cost of adaptation from the ETS revenues places a disproportionate burden on households because of the configuration of the ETS and exempts agriculture from contributing despite agriculture being New Zealand's largest emitter and also likely to be one of the major beneficiaries of adaptation subsidies through the Crown bearing a significant proportion of the climate risks faced by the agriculture sector

8. **Do you agree that the new tools, guidance and methodologies set out in this chapter will be useful for you, your community and/or iwi and hapū, business or organisation to assess climate risks and plan for adaptation?**

   While tools are useful to help us (and the wider community) understand the issues and risks, we also need frameworks around them to help achieve our objectives (and to achieve better outcomes for communities).

   For example, information on potential high risk flood zones is useful, but is much more effective at inducing change if coupled with clear rules limiting future development in those zones and requiring nature-based solutions to flood risk. This way, people are (1) disincentivised or prohibited from undertaking an activity that increases maladaptation, (2) can access the information to understand why they are being disincentivised or prohibited from undertaking that activity, and (3) can be steered towards adaptive behaviour.

   This is particularly important in land use planning where there is a moral hazard risk from incomplete information and perverse incentives. An historic example of this was development on land near Christchurch that was prone to earthquake liquefaction. Despite this information being known at the time, development nevertheless proceeded and subsequently those subdivisions faced serious damage in the Canterbury earthquakes. There the cost has fallen on the Crown and homeowners, but not those responsible for the development. Without strong regulatory frameworks similar planning errors are likely in relation to climate change risks. Guidance, while useful, does not always result in decision makers (such as local politicians) making the most responsible or 'long term' decisions particularly when the risks are in the future and the benefits are in the present. Guidance must be coupled with regulations that drive positive outcomes and proactive adaptation to climate change, prioritising nature-based solutions.

9. **Are there other actions central government should consider to:**

b. **enable you to access and understand the information you need to adapt to climate change?**

Forest & Bird is currently developing its own climate change risk assessment framework for its practical conservation projects. As we apply this to our projects issues with available information are likely to emerge. Once we have developed and tested this framework it may be a good opportunity for partnerships with others managing climate risks with conservation projects

c. **provide further tools, guidance and methodologies to assist you to adapt to climate change?**

See 9 (a) above

d. **remove barriers to greater investment in climate resilience?**

Actions that would remove barriers to greater investment in climate resilience are:

- Requiring local government to prioritise nature-based solutions
- Requiring central government and government organisations/departments to prioritise nature-based solutions
- Undertaking landscape-scale control of browsing pests across all New Zealand to protect forests and vegetation restoration projects that establish resilience and to remove the disincentive the presence of pests creates for restoration projects
- Levying greenhouse gas emitters to generate finance to support greater investment in climate resilience
- Incentives for private and iwi land-owners to retain and protect significant natural areas and to restore river margins
- Implementing the NPS-IB to discourage the destruction of significant natural areas
- Introducing regulation to phase-out activities that might lead be maladaptive or lead to increased risk. For example, regulate-out development on high-risk floodplains.
- Develop national guidance on how to manage rivers for flood control in a way that provides room for rivers, so that councils and developers have clear guidance on how to invest smartly

See also Forest & Bird's attached list of nature-based solutions to climate change risks

As an example, Forest & Bird notes that the case study in the draft Adaptation Plan considering co-investment in flood protection (Westport example) should prioritise nature-based solutions in line with the Government's decisions on the Emissions Reduction Plan.

e. **support local planning and risk reduction measures while the resource management and emergency management system reforms progress?**

Government could lead the way with national programmes/incentives to drive local government to implement nature-based solutions before any reforms regulating such activities have come through.

For example, Government could take the lead of the Netherlands national 'Room for Rivers' program and drive local government to reduce flood risk to communities by providing more room for rivers to flood safely. This could be achieved by working with councils on local projects/case studies that illustrate the co-benefits of making room

for rivers, providing national guidance or coordinating expertise (such as from the NZ Rivers Group of river experts) on how to best make room for rivers, and providing government funding opportunities for local councils that are willing to adopt a programme of 'making room for rivers'.

Central Government could also incentivise similar approaches for coastal flooding and managed retreat.

Government agencies could support local councils going through plan changes to re-zone high-risk land (e.g., coastal) or river margins. For example, DOC planning teams could support councils attempting to implement managed retreat in their coastal areas to protect coastal zones. Or Kainga Ora could support local planning processes where environmentally sensitive housing developments are being sought to work within/around flood-prone land.

Issuing national direction under the Resource Management Act to prioritise nature-based solutions as part of giving effect to Part II of the Act.

Making a stop-gap amendment to the Resource Management Act to make prioritising nature-based solutions a Matter of National Importance under Section 6 of the Act

10. **What actions do you think will have the most widespread and long-term benefit for New Zealand?**

- Driving down emissions, doing our own fair share of global effort and strongly encouraging high-emitting international partners to also do their fair share of emission reductions: the extent of adaptation required and the extent to which adaptation is even a viable policy response in the long term is dependent on the extent to which countries reduce emissions
- Reform the resource management system (but only *if* the reforms establish a priority for nature-based solutions to climate change adaptation, are clear about environmental bottom lines and require restoration of the environment, rather than just having people 'avoid, remedy, or mitigate' adverse effects).
- Pass legislation to support managed retreat, including managed retreat from rivers
- Public investment in climate change initiatives, and in particular public investment in nature-based solutions to adaptation. These needs to be multidecadal and of unprecedented scale
- Ensuring that adaptation is sufficiently funded, with long term certainty, on a transparent and equitable polluter pays basis

11. **Are there additional actions that would strengthen climate resilience?**

See the attachment outlining nature-based solutions to New Zealand's climate change risk assessment. Forest & Bird encourages agencies to map to proposals in the Adaptation Plan to ensure that they are fully incorporated into the plan.

12. **There are several Government reform programmes underway that can address some barriers to adaptation, including the Resource Management (RM) reform. Are there any additional actions that we could include in the national adaptation plan that would**

help to address barriers in the short-term before we transition to a new resource management system?

Issuing national direction under the Resource Management Act to prioritise nature-based solutions as part of giving effect to Part II of the Act.

Making a stop-gap amendment to the Resource Management Act to make prioritising nature-based solutions a Matter of National Importance under Section 6 of the Act

Making a stop gap amendment to the Fisheries Act to require climate change risks to be taken into account when making a decision under the Act

Establishing a policy that all Cabinet papers relating to specific climate change adaptation measures; matters relating to the stability of the financial system; funding for natural hazard protection; fisheries decision making and resource management decision making demonstrably gives effect to the priority accorded to nature-based solutions in the Emissions Reduction Plan

13. **In addition to clarifying roles and providing data, information, tools and guidance, how can central government unlock greater investment in resilience?**

Prioritise government co-investment into nature-based solutions (i.e., so that local government is incentivised to invest in longer-term, nature-based solutions). For example, the action "complete case study to explore co-investment for flood protection" should focus on how co-investment can be used to incentivise the relevant local councils to invest in managed retreat and nature-based solutions to flood risk mitigation, such as by 'making room for rivers'. This is known to have a much better return on investment and to cost much less over the long term than mitigation attempts such as building better stop banks. It also reduces the risk, whereas building bigger stop banks can actually increase risk (because when the stop banks fail or are overtopped, the consequences are much greater because the floodwater have much more energy).

Government needs to make it more difficult and less desirable to invest in 'bad' projects from an adaptation perspective, and desirable/easier to invest in 'good' projects. For example, regulation should be used to prohibit development on floodplains, which will then lead to investment in more resilient locations. Government should also support councils to rezone land to make development in at-risk coastal areas difficult or impossible, thereby directing development elsewhere. Financial mechanisms can also be used – e.g., ensuring bigger polluters pay a greater cost, which will incentivise lower-emissions actions.

Central government could also direct government agencies and State-owned enterprises, such as Pāmu, to invest in climate-resilient projects. This would be enabled by Government loosening expectations for financial returns from some agencies, such as Pāmu in particular, and free them up to focus on driving land use change and reducing emissions, which is much more important than what is a meagre economic return.

f. **Would a taxonomy of 'green activities' for New Zealand help to unlock investment for climate resilience?**

It is unclear what a taxonomy of 'green activities' would look like and how it would work. While we are open to the idea, we cannot comment on this when we cannot conceptualise it.

Presuming it is just a list of activities that are considered more 'climate resilient' than other activities, we are not sure this would help, at least not without regulations and financial mechanisms to drive investment towards these activities and away from 'less resilient' activities.

If the government is to continue relying on a 'free market' system, then Government must regulate that system to ensure climate-resilient projects/actions are prioritised and equitable outcomes that are good for the environment are achieved. This includes ensuring there is sufficient redistribution of wealth (including through polluter-pays mechanisms such as the ETS, and a mechanism for agriculture) to invest in nature-based climate adaptation that benefits all people of Aotearoa.

Natural environment questions

14. **Do you agree with the actions set out in this chapter?**

Forest & Bird generally supports the actions in this chapter with some caveats. We also note there are many other actions that should be taken to ensure the 'natural environment' contributes to climate change resilience and is resilient to climate change. These are provided in an appendix to this submission.

The project proposal to "prioritise nature-based solutions and implement Te Mana o Te Taiao (ANZBS)" needs to be elevated as a priority action. In addition, we consider it could actually be split into two actions – i.e., a project to "prioritise nature-based solutions" (which would be cross-governmental) and a project to "implement the ANZBS"

Forest & Bird was very active in the development of the NPS-IB, however we note its final form is yet to be determined so it is difficult to know how effective it will be in contributing to climate resilience. Forest & Bird supported the draft version of the NPS and consider it must be at least as strong as this version to have any meaningful impact on climate resilience.

We appreciate there is a role for the 'water availability and security programme', provided the focus of the programme is on managing demand for water, and the hierarchy of Te Mana o te Wai is worked within. We do not see there being a case for increasing 'supply' of water through large-scale water storage, as this (1) tends to reduce climate resilience by increasing reliance on land uses that require irrigation, and (2) water storage projects, such as dams and large water takes, have disastrous effects on ecosystem health and greatly reduce (if not destroy) the resilience of freshwater ecosystems to climate change.

Over-reliance on irrigation water is a risk to the stability of the financial system because once allocation and minimum flow limits are reached, there can be region-wide financial stress on the agriculture sector. With areas subject to greater and more frequent drought this risk to the financial system will be exacerbated.

We support the implementation of the NPSFM, but note it is a partial solution to the climate resilience of freshwater ecosystems and does not integrate with some other 'roles' of freshwater systems in climate resilience. For example, it does not direct councils

to ‘make room for rivers’ to flood safely and reduce risk to communities, or to restore wetlands to soften the impacts of extreme weather events and sequester carbon.

Forest & Bird has developed specific asks in regard to Wetland restoration and climate resilience in our ‘Every Wetland Counts’ briefing that is attached to this report - https://www.forestandbird.org.nz/sites/default/files/2022-02/Every%20Wetland%20Counts%20brochure_1.pdf,

Likewise, the project to “establish an integrated work programme to deliver climate, biodiversity, and wider environmental outcomes” needs to be prioritised.

Finally, we note the list of “actions across other outcomes areas also build the resilience of the natural environment” appears very narrow. Many other actions in the adaptation plan support (or present an opportunity to support) natural environment objectives – e.g., resource management reform, fisheries reform, flood protection case studies, etc.

15. **What else should guide central government’s actions to address risks to the natural environment from a changing climate?**

Government must prioritise and emphasise a nature-based response to climate change adaptation

Acting as soon as possible on all actions is vital to maximise gains, minimise costs, and minimise maladaptation. Given the overall global lack of effective emission reductions since 1990, the Government should base its adaptation plan on the high-emissions/high-impact scenarios.

As above, Forest & Bird has developed specific asks in regard to Wetland restoration and climate resilience in our ‘Every Wetland Counts’ briefing that is attached to this report - https://www.forestandbird.org.nz/sites/default/files/2022-02/Every%20Wetland%20Counts%20brochure_1.pdf,

16. **Are there other actions central government should consider to:**

g. **support you, your community, iwi and hapū, business and/or organisation to build the natural environment’s climate resilience?**

As above, we have provided a list of additional actions we consider important as an appendix.

h. **strengthen biosecurity in the face of climate change?**

As above, we have provided a list of additional actions we consider important as an appendix. Strengthening the biosecurity system, including the management of pests and diseases already in New Zealand will need to be a priority action because of the importance of nature-based solutions to adaptation and the unique risks posed to New Zealand’s biodiversity (and therefore implementation of nature-based solutions). Pest management needs to be seen as a critical intervention to underpin the entire system of adaptation.

i. **identify and support New Zealand’s most vulnerable ecosystems and species in a changing climate?**

As above, we have provided a list of additional actions we consider important as an appendix. Note also the comments in relation to the need to plan to a high emissions/high impact scenario and the central role of biosecurity and pest management.

It should be noted that adaptation to ocean acidification associated with greenhouse gas emissions is largely impracticable and so the only effective policy response to ocean acidification is global emission reductions.

17. **What do you identify as the most important actions that will come from outside of central government (e.g., local government, the private sector or other asset owners, iwi, hāpu and/or other Māori groupings such as: business, forestry, fisheries, tourism, urban Māori, the private sector) to build the natural environment's resilience to the impacts of climate change?**

    Local Government will have a critical role in implementing the proposed NPS on Indigenous Biodiversity and the NPSM. It will also have a critical role in implementing the priority for nature-based solutions given the extent to which adaptation relies on local and regional government investment and decision making. Examples include:

    - Local/regional actions include implementing nature-based solutions to climate change, such as 'making room for rivers' (a partial example of this is the 'Riverlink' project being undertaken by GWRC for Te Awakairangi)
    - Local/regional plan changes to re-zone high risk areas (e.g., to stop development or to protect river margins/floodways) or to ensure more climate resilient development

    Private and community organisations have a key role in supporting pest management and restoration efforts such as the pest control in the South Island by Zero Invasive Predators to remove introduced predators from large areas of native forests and the work of Forest & Bird branches to undertake pest control and restore forests, coastal habitats and wetlands.

    Insurance industry moving away from insuring assets in high-risk areas and supporting investment in resilience to reduce risks to their industry.

18. **Are there additional actions that would advance the role of Māori as kaitiaki in a changing climate?**

    Forest & Bird is working with some iwi in relation to forest and marine protection, but we it would be more appropriate for the Crown to explore this with iwi/Māori as part of discussions about giving effort to Treaty Partnership.

Homes, buildings and places questions

A decision-making framework for public housing assets will be developed to determine the Homes, buildings and places questions

19. **Do you agree with the outcome and objectives in this chapter?**

    Protecting homes, buildings and places will require implementation of nature-based solutions beyond urban boundaries

20. **What else should guide central government's actions to increase the resilience of our homes, buildings and places?**

Implementing nature-based solutions *beyond* the urban environmental will also help increase the resilience of our homes, buildings, and places to climate change. For example,

- making room for rivers (i.e., widening floodplains and restoring riparian margins of rivers, etc.) upstream and downstream of towns and cities provides more room for rivers to flood safely, and reduces pressure on flood protection infrastructure protecting urban areas.
- Considering changes to coastal sediment transport under different climate change scenarios may influence whether gravel extraction (including in rivers), seabed mining and coastal armouring may impact on coastal housing and infrastructure a significant distance away (e.g., because gravel in rivers supplies gravel to the coast)
- Restoring forest and wetlands helps soften the impact of extreme weather events and helps reduce pressure on urban areas
- Decisions on the funding and management of all public lands should reflect the lower catchment risks to life, health, infrastructure and property from the effects of degrading upper catchment areas that are important for buffering extreme flood flows
- Decisions on the funding and management of all public lands should also reflect the importance of those areas in trapping water and thereby providing adequate water flows that build resilience for downstream communities

Protecting the urban environment will require catchment wide thinking from a mountains-to-sea approach

21. **Do you agree with the actions set out in this chapter?**

See comments in relation to nature-based solutions above

22. **Are there other actions central government should consider to:**

j. **better promote the use of mātauranga Māori and Māori urban design principles to support adaptation of homes, buildings and places?**

We feel this question would be best explored through discussion with iwi/Māori.

k. **ensure these actions support adaptation measures targeted to different places and respond to local social, cultural, economic and environmental characteristics?**

Adaptation measures should prioritise nature-based solutions in accordance with government decisions on the Emissions Reduction Plan. This will require amendments to the Local Government Act and resource management law. Nature-based solutions are by their character local and regional because they are grounded in local ecology and geomorphology.

l. **understand and minimise the impacts to cultural heritage arising from climate change?**

Protecting and restoring nature is critical to safeguarding and strengthening Te Ao Māori. Regular Department of Conservation surveys also show that New Zealanders more

broadly have strong identity values associated with nature and with aspects of lifestyles that are connected to nature. Nature is the foundation for a significant proportion of our cultural heritage.

23. **Do you think that there is a role for government in supporting actions to make existing homes and/or buildings more resilient to future climate hazards?**

    Generally, if someone knowingly develops in a high-risk zone, then the costs of adaptation should fall to them on an exacerbator pays principle. However, in other cases (where the risk was not known to the person or where there are important social equity issues), there will be a role for government.

    Government has a role in ensuring that where possible the costs fall fairly. This means that the costs should primarily fall on emitters and exacerbators and social equity must be structured into decision making.

    Government can assist with driving managed retreat, such as through supporting councils in rezoning land and in incentivising movement away from at-risk zones.

    Government could provide funding to increase distributed electricity generation, such as through solar panels, which will make the electricity network more resilient to extreme weather events.

    Government could incentivise retention of significant natural areas on private land (such as in urban areas) and the retention of green space (i.e., areas that absorb water rather than create runoff)

    Government could subsidise rainwater retention tanks, to manage high rainfall and to provide emergency drinking water during dry periods.

24. **From the proposed actions for buildings, what groups are likely to be most impacted and what actions or policies could help reduce these impacts?**

    No comment.

25. **What are some of the current barriers you have observed or experienced to increasing buildings' resilience to climate change impacts?**

    No comment.

Infrastructure questions

26. **Do you agree with the outcome and objectives in this chapter?**

    This chapter should place a significantly greater emphasis on the role of nature-based solutions in making infrastructure more resilient to climate change or as an alternative to infrastructure where that infrastructure is for adaptation purposes, in line with decisions on the Emissions Reduction Plan.

    For example, while the 'Riverlink' case study is a step in the right direction, we consider there is a significant opportunity to reduce the risk to Aotearoa's infrastructure through 'making room for rivers' (i.e., providing sufficient room in floodplains for rivers to flood safely). Rivers with more room experience 'lower energy' floods (because water are shallower) and therefore present much lower risk to infrastructure that has historically (and recently) been damaged or destroyed by floods (e.g., bridges, roads, power distribution, rail network components, stop banks, etc.). We think this sort of approach is critical to making infrastructure more resilient.

    A similar argument applies to other 'green infrastructure' - e.g., wetlands to provide buffers from floods and to act as 'springs/puna' during droughts; sand dunes, mangroves, and beaches to act as buffers to storm surge and king tides; etc. Greater emphasis should be given to these sorts of nature-based solutions when thinking about making infrastructure more resilient and should be considered natural infrastructure in their own right.

27. **What else should guide central government's actions to prepare infrastructure for a changing climate?**

    Four key principles should underpin the Government's approach to infrastructure:

    - Separating infrastructure from risk exposure through managed retreat and prohibiting placement of new infrastructure in high-risk areas
    - 'Incentivising more distributed systems to increase the resilience of communities, e.g., through solar panels on peoples' roofs, rainwater tanks to store emergency water, etc
    - Recognising that natural ecosystems are infrastructure in their own right and should be invested in on that basis
    - Recognising that relocating infrastructure poses significant risks to nature and ensuring that these risks are appropriately managed so as to not exacerbate the biodiversity crisis

28. **Do you agree with the actions set out in this chapter?**

    We strongly support increased investment in public transport and active transport and that it is done so in a way that ensure accessibility for all

29. **The national adaptation plan has identified several actions to support adaptation in all infrastructure types and all regions of Aotearoa.**

    m. **Do you see potential for further aligning actions across local government, central government and private sector asset owners?**

    No comment.

n. **Do you see any further opportunities to include local mana whenua perspectives and mātauranga Māori in infrastructure adaptation decision-making?**

The systems approach embedded in mātauranga Māori is crucial to efficient and effective adaptation.

o. **Do you see any further opportunities to include local community perspectives in infrastructure adaptation decision-making?**

It will be important to involve local communities in decisions on the relocation of infrastructure and the development of distributed infrastructure. This includes adequate involvement in resource management decisions. Forest & Bird notes with concern the proposed extension of the fast-tracking Covid resource management consenting process despite New Zealand emerging from the economic crisis associated with Covid into a higher inflation environment with full employment. Support for adaptation responses will decrease significantly if people are shut out of the decision-making process.

p. **Do you see any further opportunities to ensure that groups who may be disproportionally impacted by climate change, or who are less able to adapt (such as those on low incomes, beneficiaries, disabled people, women, older people, youth, migrant communities) have continued and improved access to infrastructure services as we adapt?**

All agencies with responsibility for designing and implementing infrastructure services should have an accessibility obligation with reporting to an appropriate agency and engagement with accessibility advocates. Barriers to accessibility are often complex and need the engagement of those with experience of disability or who are disproportionately impacted. One example is how public transport schedules are often geared around commuter schedules. In practice this prioritises middle class workers who are more likely to be men. Those with responsibilities for childcare, or who look after relatives then find that schedules are irregular in the times that they need to access public transport.

q. **Do you think we have prioritized the right tools and guidance to help infrastructure asset owners understand and manage climate risk?**

No comment.

30. **Are there additional infrastructure actions that would help to strengthen Māori climate resilience?**

Iwi/Māori are best placed to answer this question directly, including through direct involvement in the governance of infrastructure systems.

31. **Are there any other tools or data that would help infrastructure asset owners make better decisions?**

Information on geomorphology, hydrology and ecology that helps them better deploy nature-based solutions and which also helps them understand where there are dependencies on existing natural systems.

Communities questions

32. **Do you agree with the outcome and objectives in this chapter?**

    Forest & Bird is very supportive of the idea of "ecosystems and species [having] room to move". This relates directly to the concept of making room for rivers that we have emphasised throughout our response to this consultation.

33. **Do you agree with the actions set out in this chapter?**

    We are very supportive of:

    - Implementation of the NPS IB (provided it is robust and directive)
    - Deliver Jobs for Nature to restore Indigenous Ecosystems
    - Implement the NPSFM 2020
    - Implement Revitalising the Gulf
    - Implement South-east marine protection initiative
    - Implement sustainable hill country erosion programme (provided it is done with eco-sourced native plants or has a clear plan to revert to native vegetation)
    - Prioritise nature-based solutions and implement Te Mana o Te Taiao
    - Establish an integrated work programme to deliver climate, biodiversity, and wider environmental outcomes

    Further, a well-designed health adaptation response should draw on the synergies between biosecurity for health reasons and biosecurity for biodiversity protection reasons. The biosecurity system should support both health and nature, and in some cases, such as TB spread by browsing pests and toxoplasmosis spread by feral cats, human, farm animal and indigenous species can co benefit from a joined-up biosecurity response.

34. **What actions will provide the greatest opportunities for you and your community to build climate resilience?**

    Those listed above.

35. **Are there additional actions central government should consider to:**

    . **support your health and wellbeing in the face of climate change?**

    A list of actions is provided as an appendix to this submission.

    a. **promote an inclusive response to climate change?**

    See comments above in relation to inclusive infrastructure

    b. **target support to the most vulnerable and those disproportionately impacted?**

    See comments above in relation to financing adaptation on an emitter and exacerbator pays approach and in relation to inclusive infrastructure

36. **What do you think are the most important actions that will come from outside of central government (e.g., local government, the private sector or other asset owners, iwi, hāpu, non-government organisations, community groups) to strengthen community resilience in the face of climate change?**

Protection and restoration of biodiversity on private, iwi and council land, including the restoration of forests and wetlands.

Implementing nature-based solutions (such as making room for rivers, which as discussed throughout this response, will increase community resilience to the impacts of climate change).

37. **Are there additional actions could be included in the national adaptation plan to help strengthen climate resilience for iwi, hāpu and whānau?**

iwi, hāpu and whānau are best placed to address this question.

Economy and financial system questions

38. **Do you agree with the outcome and objectives in this chapter?**

The approach to this chapter is a positive start but needs to more deeply recognise the relationship between nature and climate change risk management. Key matters that remain unaddressed, or insufficiently addressed, in this chapter are:

- The extent to which polluters, exacerbator and beneficiaries should pay for adaptation. In this case polluters are greenhouse gas emitters, exacerbators are those who locate development and infrastructure in risk locations and beneficiaries are those whose insurance price signal is reduced through nature-based adaptation such as the presence of wetlands, native forests and sand dunes that mitigate climate related hazards.
- The extent to which the ETS is presently a highly distorted polluter pays system and whether it should be supplemented by an adaptation levy to contribute finance for adaptation
- The extent to which the economic system in New Zealand is highly dependent on nature for food, fibre, materials and ecosystem services, including climate resilience and the scale of investment required to safeguard those important functions to the economy.
- The role of nature as critical infrastructure.

39. **What else should central government do to realise a productive, sustainable and inclusive economy that adapts and builds resilience to a changing climate?**

The Government needs to address each of the issues identified above. This includes realistic assessment of the scale of financing required to safeguard and restore important ecological functions on a need to have rather than nice to have basis, a clear understanding of environmental limits and a clear plan to finance the large-scale protection and restoration needed.

There needs to be an explicit model of funding for adaptation that recognises the role played by emitters, exacerbators and insurance beneficiaries. This may require the adoption of new models of financing from emitters and the insurance sector for nature-based solutions and a greater responsibility (regulatory and financial) on exacerbators.

Actions such as "develop options for home flood insurance issues" must be implemented alongside nature-based solutions such as making room for rivers. There is no point is softening the impact of insurance retreat if there is not a longer-term plan to reduce risk of flooding to communities, and to support managed retreat. Making room for rivers (i.e., providing more room in floodplains for rivers to flood safely, with many co-benefits), protecting and restoring forested catchments and restoring coastal ecosystems are critical long-term programmes which complement insurance-related work.

Emissions must be fairly priced into the ETS – i.e., agriculture needs to pay its share for pollution.

Wetland carbon sequestration potential needs to be included in the ETS to drive wetland restoration.

New Zealand needs to deepen the Living Standards Framework and continue the move away from measuring GDP and measure other things more relevant to environmental and human wellbeing.

New Zealand needs to move away from having 'growth' goals for economic performance and instead have environmental and wellbeing goals. The idea of 'degrowth' is emerging in economic theory and needs to be developed in New Zealand's economic thinking- https://www.rnz.co.nz/national/programmes/ninetonoon/audio/2018840394/business-commentator-rebecca-stevenson-is-it-time-to-chuck-the-growth-economy-in-the-bin

40. **Do you agree with the actions set out in this chapter?**

The Reserve Bank should consider climate change risks to the financial system. These risks should include: risks of overreliance on irrigation leading to financial stress in drought; risks to insurance finance from extreme weather events in association with inadequate land management; risks to the stability of insurance finance and lending for property through inadequate protection of coastal ecosystems such as sand dunes and mangrove forests, the benefits of managed retreat and creating room for rivers for the stability of the financial system. Forest & Bird encourages the Reserve Bank to engage with NGOs in risk identification.

The current fisheries reform does not add climate resilience into the Fisheries Act and further reform of the Fisheries Act and stock setting processes will be needed to deliver progress on adaptation.

41. **Are there other actions central government should consider to:**

. **support sectors, businesses and regional economies to identify climate risks and adapt?**

Reducing reliance on irrigation and creating room for rivers to flow naturally will significantly lower risks in some regions. Informing sectors, businesses and regional economies about the benefits being provided by natural ecosystems will help communities make better decisions on nature-based solutions and lower risks. It also provides them with interesting marketing angles through which they can tell local stories of their products/businesses.

a. **promote a resilient financial system in the face of climate change?**

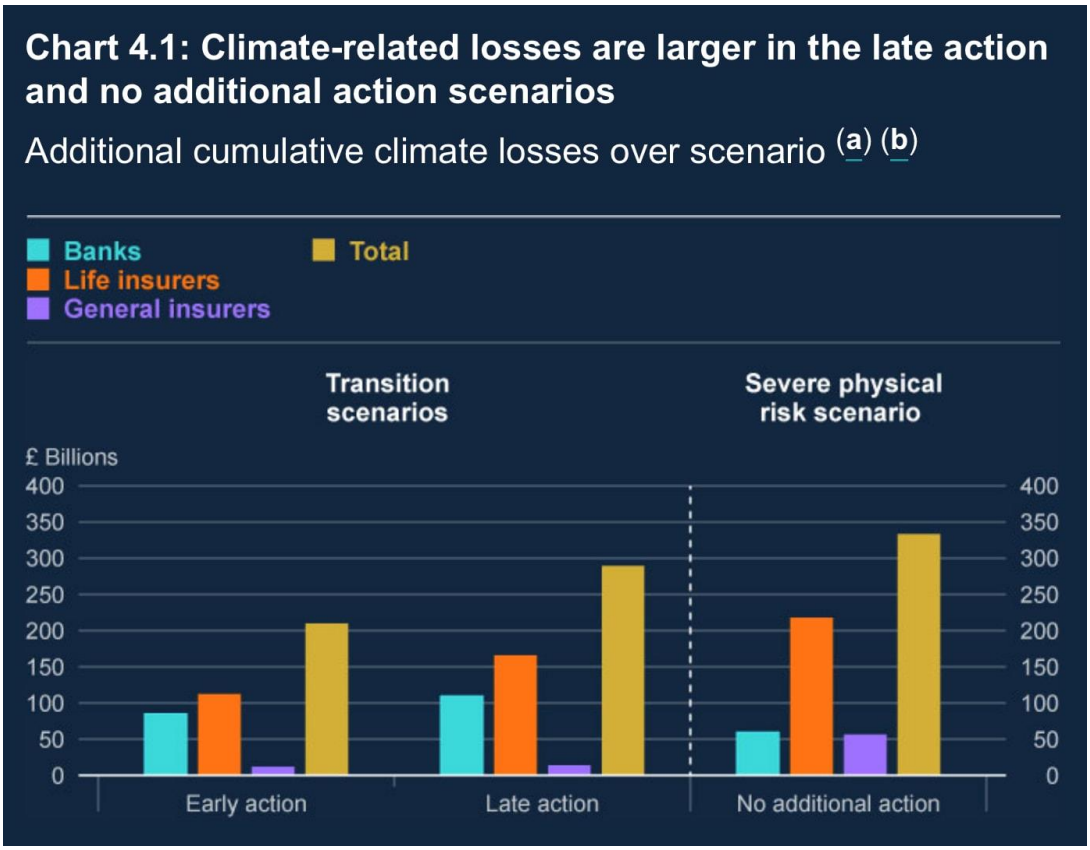
See comments above about recognising the critical role of nature-based solutions in maintaining insurability and reducing premiums and about the importance of the Reserve Bank engaging with NGOs on risk identification.

42. **What do you think are the most important actions that will come from outside of central government (e.g., local government, the private sector or other asset owners, iwi, hāpu and/or other Māori groupings such as: business, forestry, fisheries, tourism, urban Māori, the private sector) to reduce the economic and financial risk they face from climate change?**

Insurance sector unwillingness to support development in high-risk areas or high-risk activities such as irrigation reliant intensive agriculture will act as a significant driver because of the centrality of insurance to securing capital finance whether in the form of equity or loans.

Local/regional government zoning decisions can protect business from investing in at risk areas

Early investment in adaptation. The importance of this was affirmed recently by The Bank of England, who released its first estimates of the potential losses to banks and insurers from climate change. It estimated climate-related losses are much larger when action is delayed or not taken and are much smaller if early action is taken (see chart below). https://www.bankofengland.co.uk/stress-testing/2022/results-of-the-2021-climate-biennial-exploratory-scenario?utm_source=substack&utm_medium=email



43. **Are there additional actions within the financial system that would help strengthen Māori climate resilience?**

    We feel this question would be best explored through discussion with iwi/Māori.

44. **In the context of other risk management options (e.g., flood barriers, retreat from high-risk areas), what role should insurance have as a response to flood risk? Please explain your answer.**

    Any actions related to insurance must be implemented alongside nature-based solutions such as making room for rivers, managed retreat, restorations of coastal areas and wetlands, etc. There is no point is softening the impact of insurance retreat if there is not a longer-term plan to reduce risk of flooding (or other impacts) to communities.

45. **Should the Government have a role in supporting flood insurance as climate change risks cause private insurance retreat?**

    Any role for government should be based on addressing social equity issues and should avoid moral hazard. Experience from the response to the GFC in 2008 was that any situation that allows moral hazard will be exploited.

The primary means of dealing with flood risk must be to reduce the risk of exposure in the first place such as the approach used by the Netherlands, where there is a national programme to make 'room for rivers' and reduce flood risk. This is noteworthy given the challenges of creating room for rivers in a highly densely populated country with significant land area in water ways.

Consideration should also be given to the risks of reckless local government behaviour - for example as was seen when the Westland District Council carried out unconsented river armouring work and further attempted to grant a contract for a sewage treatment plant in Franz Josef to a South Auckland cake decorating company – as the Crown risks wearing the costs.

. **Does your answer to the above question depend on the circumstances? (For example, who the owner is (e.g., low income), the nature and characteristics of the asset (e.g., residential or commercial property, contents and vehicles), what other risk management options are available and their cost/benefit, and where the asset is located?) Please explain your answer.**

Yes, the primary role for the Government should be to address social equity problems where people cannot easily move due to low incomes or the nature of property ownership (such as iwi land).

46. **If you think the Government should have a role in supporting flood insurance as climate change risks cause private insurance retreat, how do you envision the Government's role, and how is this best achieved (e.g., direct support and/or indirect support such as reducing underlying flood risk)?**

    As above, any role must be accompanied by national plans to reduce risk of exposure in the first place. For example, in the Netherlands, where there is a national programme to make 'room for rivers' and reduce flood risk in the first place.

We agree there should be support to reduce underlying flood risk, but this must be through nature-based solutions that will work over the long term, and will not increase the risk to the community (e.g., raising stop banks can just increase the risk, because if/when they fail, the energy of floodwaters is much greater and the damage is much greater, which then means a greater insurance cost and more casualties).

47. **If the Government were to directly support flood insurance:**

. **what is the best way to provide this direct support?**

Forest & Bird does not have a formal view, but in principle it should be based on just transition principles and aimed at reducing rather than exacerbating social inequality. Consideration should be given to the extent to which an activity has contributed to risk either through encroachment into riverbeds or flood plains or by creating emissions.

a. **should the Government's focus be to support availability or affordability of insurance, or both?**

Forest & Bird does not have a formal view, but in principle it should be based on just transition principles and aimed at reducing rather than exacerbating social inequality and take into the matters relating to risk exacerbation given above.

b. **how should the costs of that support be funded, and by whom?**

Support should be funded by levying greenhouse gas emitters on a polluter pays basis

c. **what are the benefits and downsides of this approach?**

Moral hazard where property developers (whether residential, commercial or farming) consider that there is a chance that the climate risks of their decisions will be carried by the Crown.

d. **should this support be temporary or permanent?**

Temporary. It must be coupled with a nature-based approach to reduce flood risk (making room for rivers, restoring wetlands, incentivising adaptation of houses) and managed retreat. Ideally, we would eventually end up with very little housing/infrastructure in high-risk areas. The only way to ensure change is incentivised is to make this temporary.

e. **if temporary, what additional measures, if any, do you think would be needed to eventually withdraw this support (e.g., undertaking wider flood protection work)?**

As above, a long-term plan to use nature-based solutions to reduce flood risk and exposure and to manage retreat.

f. **what would the risks or benefits be of also including non-residential property, such as commercial property?**

See the comments above in relation to moral hazard. Non-residential property should generally be excluded (including agricultural land) except where there are important social equity reasons for inclusion (such as marae).

g. **what design features or complementary policies are needed so any flood insurance intervention retains incentives for sound flood-risk management (e.g., discouraging development in high-risk locations)?**

As above, a long-term plan to use nature-based solutions to reduce flood risk and exposure, which would include making room for rivers, wetland restoration, managed retreat policies, etc.

48. **How effective do you think the insurance "price signal" (e.g., higher premiums or loss of insurance) is for providing incentives to reduce flood risk?**

Not effective enough alone. In many cases the price signal will only be effective when property changes hands. This inelasticity to price means that without a managed national response people will be locked into higher premiums than might occur from a more managed approach and insurance companies may face higher risks. Relying on a price signal alone could lead to catastrophic market failure if people are unable to sell but also unable to insure property that they hold.

The "price signal" i.e., premiums, should internalise the cost of maintaining natural systems such as forests and wetlands that contribute to insurability and lower premiums. For example, South Island West Coast properties are dependent on te management of public conservation land to reduce risks from flooding and should therefore contribute to the cost of Department of Conservation management of those areas.

49. **In your view, should a scheme similar to Flood Re in New Zealand be used to address current and future access and affordability issues for flood insurance? Why or why not?**

Unsure. Forest & Bird would support a programme similar to the Dutch 'room for rivers' program.

50. **How do you think a scheme similar to Flood Re in New Zealand could support or hinder climate change adaptation initiatives in New Zealand?**

See above

Closing general question

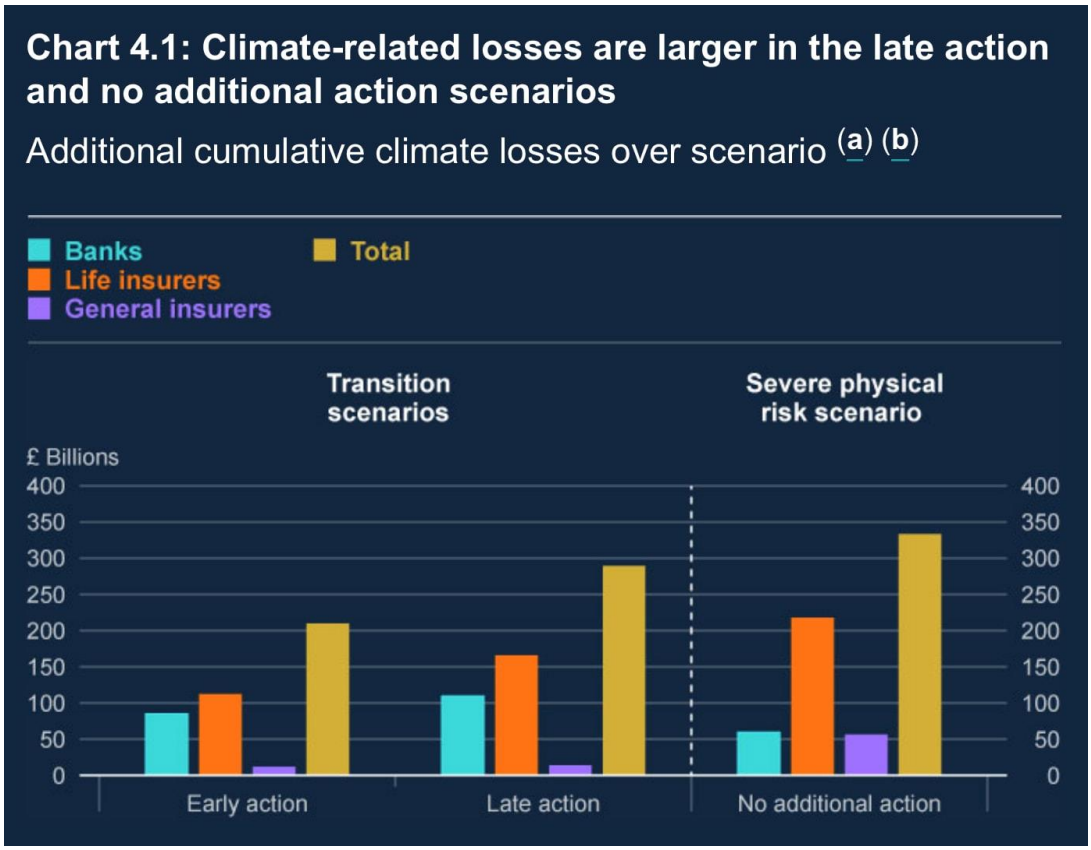
51. **Do you have any other thoughts about the draft national adaptation plan that you would like to share?**

Forest & Bird notes the separation of the adaptation plan and the 'managed retreat' document (and the way the consultation process has been presented) was confusing.

There needs to be a very strong focus on nature-based solutions as creating the most co-benefits, being most cost-effective, and having the greatest long-term impact on climate change adaptation. Nature based solutions to natural hazards are not new, for example Forest & Bird has highlighted the importance of forests for flood manage for almost a century.

We emphasise the importance of early investment in climate change adaptation to minimise cost and maximise co—benefits. As above, this was affirmed recently by The Bank of England, who released its first estimates of the potential losses to banks and insurers from climate change. It estimated climate-related losses are much larger when action is delayed or not taken and are much smaller if early action is taken (see chart below).

https://www.bankofengland.co.uk/stress-testing/2022/results-of-the-2021-climate-biennial-exploratory-scenario?utm_source=substack&utm_medium=email



Context

How does this link to the national adaptation plan?

This work relates to the following **critical actions** within the national adaptation plan:

- reform the Resource Management System
- pass legislation to support managed retreat
- develop options for home flood insurance issues.

This section of the consultation material outlines the specific problem in relation to managed retreat and flood insurance, and the key policy issues this work will need to address.

What is the problem?

Due to its geography and location, New Zealand is prone to a range of natural hazards, including earthquakes, volcanoes, erosion, landslides and extreme weather events. The effects of climate change mean the intensity and frequency of extreme weather events is only going to increase. We are already experiencing flooding and coastal erosion that threaten our essential infrastructure, valuable ecosystems and the safety of whole communities.

Most of our major urban centres and population are located on the coast or on floodplains of major rivers. This also makes us vulnerable. For example, if sea levels rise by half a metre, 36,000 buildings, 350 square kilometres of land and an extra 48,900 people would be exposed to flooding during extreme events[1] – that's around the population of Nelson.

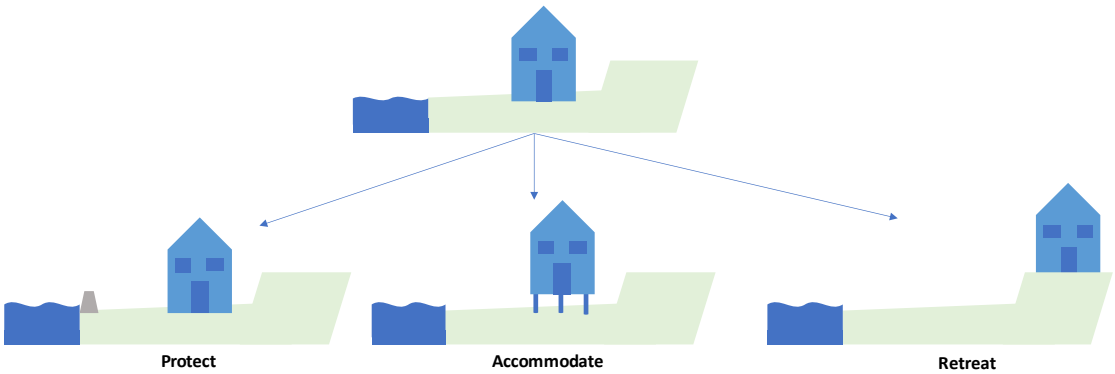
Over the last ten years, climate change related floods have cost the New Zealand economy at least $120 million for privately insured damages. Economic losses from droughts have cost a further $720 million.[2]There will also be costs associated with adapting to climate change. The Government has not yet decided on a preferred policy option to address this problem. Central government will not bear every risk and cost of climate change, including climate change adaptation. Risk and cost will fall across different parts of society, including asset or property owners, their insurance companies, their banks, local government and central government. The Government has choices about the role it plays and how it influences the way these costs and risks fall. Care will need to be taken to manage any perverse or unintended outcomes such as moral hazard (that is, inappropriate incentives to continue developing in at-risk areas).

What is managed retreat?

Managed retreat is an approach to reduce or eliminate exposure to intolerable risk. It includes the idea of strategically relocating assets, activities and sites of cultural significance (to Māori and non-Māori) away from at-risk areas within a planned period of time. Managed retreat might be used in response to any climate change impact or natural hazard, whether or not that hazard is caused or exacerbated by climate change. It is an option that may be considered throughout Aotearoa.

Retreating from at risk areas is one way of managing the risks of climate change and natural hazards. This option will need to be considered alongside other approaches, including those to increase the resilience of assets in situ. Actions in the national adaptation plan and resource management reforms will help support these other options.

Figure 1: Adaptation options



[1] Paulik R, Stephens S, Wadhwa S, Bell R, Popovich B, Robinson B. 2019. *Coastal Flooding Exposure Under Future Sea-level Rise for New Zealand*. Wellington: NIWA.

[2] Frame D, Rosier S, Carey-Smith T, Harrington L, Dean S, Noy I. 2018. *Estimating Financial Costs of Climate Change in New Zealand: An Estimate of Climate Change-Related Weather Event Costs*. New Zealand Climate Change Institute and NIWA.

Why do we need legislation?

Managed retreat raises unprecedented governance issues and complex policy and funding challenges. These cannot be adequately addressed as part of other legislation. Given the scale of the issues (geographic, economic and social), these challenges also require central government involvement. Currently there are no dedicated tools or processes to guide how individual households or communities might permanently shift away from areas of intolerable risk. While there have been some instances where people have been supported to retreat, these have often come with significant costs.

Different processes and legislation have been used to respond after natural disasters. For example, after the Canterbury earthquakes special legislation was introduced to support the recovery and rebuilding. However, after an extreme weather event caused significant damage in Matatā, managed retreat was achieved through voluntary acceptance of purchase offers with supporting changes to regional and district plans.

Managed retreat at Matatā is now largely complete, 16 years after the original debris flow event. It has come at a total cost of approximately $16.8 million and has caused years of stress and uncertainty for the community. It required cooperation and funding from Whakatane District Council, Bay of Plenty Regional Council and central government. The Matatā experience highlighted the need for a national framework for managed retreat, with clearly defined roles and responsibilities for individuals, central and local government (including a consistent approach to central and local government cooperation), national direction and changes to existing land use protections.

The proposed Natural and Built Environments Act (NBA) and Strategic Planning Act (SPA) will help enable long-term, proactive planning for managed retreat. In most cases, much of the planning process that could result in a managed retreat will be done through the NBA and SPA processes.

Separate legislation, currently being referred to as the Climate Adaptation Act (CAA), is intended to provide tools and processes to plan and implement managed retreats. For example, additional powers and processes will be needed to address issues of ownership of property that is retreated from. See the *system wide actions* chapter for more detail on these proposed Acts.

Policy considerations

Aspects of a managed retreat system

The matters outlined below make up a high-level framework for a managed retreat system. The Government has not yet decided on a preferred policy option for a managed retreat system. This material outlines key policy issues that are being considered. Your feedback will help inform the more detailed policy work that will follow this consultation.

Objectives and principles

We have identified five key objectives and six principles to guide the development of legislation.

Table 1: Objectives and principles of legislation

Managed retreat	
Objectives	• To set clear roles, responsibilities and processes for managed retreat from areas of intolerable risk • To provide stronger tools for councils to modify or extinguish existing uses of land • To provide clarity on tools and processes for acquiring land and related compensation • To clarify local government liability for decision-making on managed retreat, and the role of the courts • To provide clear criteria for when central government will intervene (or not) in a managed retreat process
Principles	• Managed retreat processes are efficient, fair, open and transparent • Communities are actively engaged in conversations about risk and in determining and implementing options for risk management • Social and cultural connections to community and place are maintained as much as possible • There is flexibility as to how managed retreat processes play out in different contexts • Iwi/Māori are represented in governance and management and have direct input and influence in managed retreat processes, and outcomes for Iwi/Māori are supported • Protection of the natural environment and the use of nature-based solutions are prioritised

We have identified four key objectives and nine principles to guide our approach to funding issues, including central government's funding responsibilities.

Table 2: Objectives and principles of funding responsibilities

Funding and financing adaptation	
Objectives	• To reduce hardship due to the impacts of climate change • To incentivise better long-term investment decisions concerning climate change risk • To reduce liabilities, including contingent liabilities to the Crown • To support the role of banking and insurance in facilitating risk management
Principles	• Limit Crown's fiscal exposure • Minimise moral hazard • Solutions are designed to be as simple as possible • Ensure fairness and equity for and between communities, including across generations • Beneficiaries of risk mitigation should contribute to costs • Minimise cost over time by providing as much advance notice as possible • Solutions support system coherence and the overall adaptation system response • Risks and responsibilities are appropriately shared across parties including property owners, local government, central government, and banking and insurance industries

Questions: (questions 1–51 are within the draft national adaptation plan)

52. **Do you agree with the proposed principles and objectives for the Climate Adaptation Act? Please explain why or why not.**

With some amendment, Forest & Bird generally supports the principles and objectives. Our main observations are:

- Forest & Bird supports the priority given to the protection of the natural environment and nature-based solutions in the principles. We seek to be consulted on how this principle will be given effect to in the draft legislation
- The objectives should include the protection and restoration of nature and Te Ao Māori
- Forest & Bird supports the funding objective of avoiding moral hazard and notes that this will need to be reinforced in other aspects of planning law to prevent resource management planning decisions that could adversely affect the Crown's position
- A key principle for funding adaptation, including through managed retreat, to climate change related hazards should be the polluter pays principle. This is a problem created by people and responsibility is proportional to emissions. There is a strong case to include an emitter pays principle.
- The ETS is not appropriate vehicle for an emitter-pays approach to funding adaptation as it is highly distorted by free allocation and transfers are complex with private to public, public to private and private to private transfers. An undifferentiated levy across all greenhouse gas emissions may be more appropriate.

52. Are there any other principles or objectives you think would be useful? Please explain why.

Forest & Bird considers that alongside the polluter pays principle for hazards caused or exacerbated by greenhouse gas emissions, it would be useful to have a principle outlining that where a commercial business knowingly develops in a high-risk area, they should bear the cost of risk mitigation and/or managed retreat.

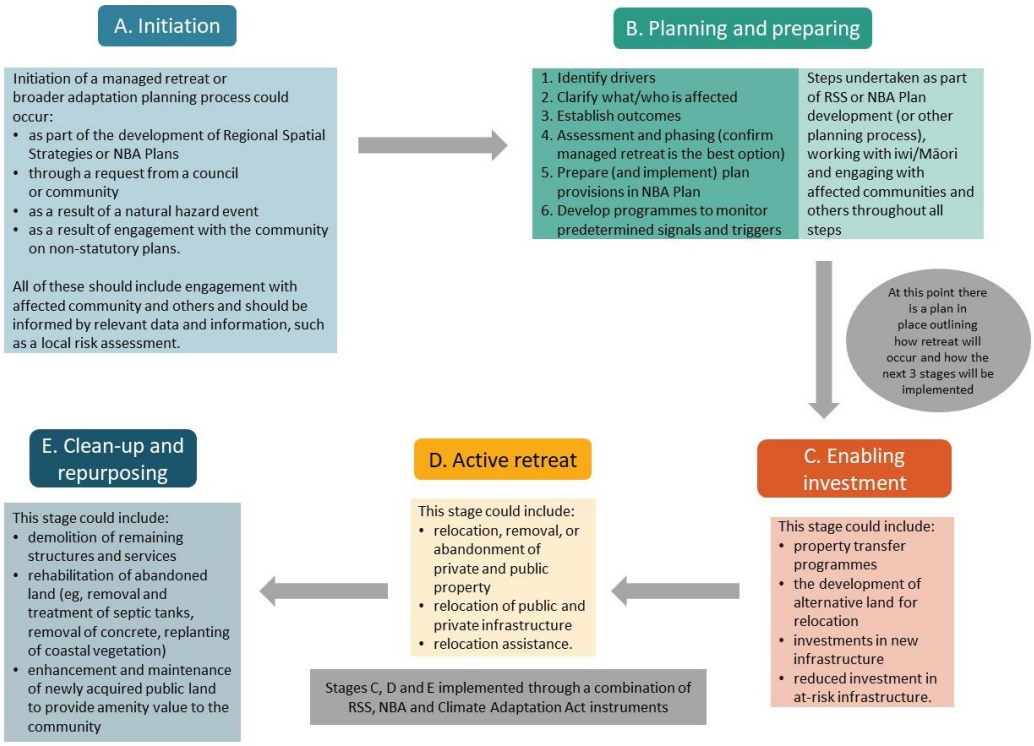
Forest & Bird also considers the principle about the protection of the natural environment and prioritisation of nature-based solutions could be widened to include restoration, i.e., "Protection and restoration of the natural environment and the use of nature-based solutions are prioritised."

Establishing a process for managed retreat

Figure 2 below outlines the possible stages of a managed retreat process and how they might link to different parts of the proposed resource management system.

We do not expect the process to be identical for every retreat. For example, a retreat that responds to a natural hazard event (e.g., a severe flood) is likely to differ from a retreat that is planned to avoid a future natural hazard or gradual changes that will make an area unsafe in the future. In these scenarios, the various stages – including the timing and sequencing of individual steps – may look quite different.

Figure 2: Stages of a managed retreat process



To illustrate how this could play out – councils in a region undertake a risk assessment and gather other data and information to inform regional spatial strategy (RSS) development. The RSS:

- shows different levels of risk throughout the region
- identifies areas which are at high risk from flooding (or other natural hazards) and where adaptation actions, such as managed retreat, are likely to be needed in the future
- identifies low-risk areas where development could occur, including to accommodate communities that may need to retreat.

The councils, iwi/Māori, the community in the affected area and the wider community can then explore options for reducing risk in the area. Together they would determine when certain properties would need to retreat – either at a particular time or when a particular threshold is reached – and develop a plan.

Planning for retreat could include:

- provisions in the NBA Plan restricting what can be done on the properties before retreat
- plans to develop new low-risk areas for people to retreat to
- processes and mechanisms to transfer property and provide assistance to those who have to retreat
- agreements as to what will happen with the area after retreat and who will be responsible for it.

Questions:

53. Do you agree with the process outlined and what would be required to make it most effective?

    No comment.

54. What do you think should trigger the process? What data and information would be needed?

    We consider an additional trigger mechanism could be national direction, such as a National Policy Statement under the successor legislation to the Resource Management Act

55. What other processes do you think might be needed, and in what circumstances?

    No comment.

Questions:

56. **What roles and responsibilities do you think central government, local government, iwi/Māori, affected communities, individuals, businesses and the wider public should have:**

    h. **in a managed retreat process?**

    i. **sharing the costs of managed retreat?**

Central and local government have a key role to play in identifying at-risk areas and providing direction (such as through national direction, regional/district plans, zoning, etc.) to ensure

that at-risk areas are not further developed in or are not developed in the first place. They then have a role in coordinating a transition out of those areas if managed retreat is undertaken.

They also have a responsibility to ensure that any investment (such as in coastal walls or flood protection infrasturture, such as stopbanks) does not increase the risk to a community over the long term (e.g. because when those 'protections' fail or are overwhelmed, the damage is much greater). They also need to ensure any public investment does not favour people unfairly (for example, 'protecting' expensive coastal properties, using rates gathered from the community, is likely to favour people with a lot of wealth already, and cost those who generally live in poorer areas).

Government, at local and central levels, also has to ensure managed nature restoration and nature-based solutions are considered and prioritised in a managed retreat process. E.g., a council might determine retreat from a floodplain is necessary, in which case it should prioritise restoration of that floodplain with riparian wetlands etc., before it considers turning it into football fields or other recreational areas. This should be written into any legislation (i.e. a hierarchy similar to Te Mana o te Wai).

Funding should be on the basis of greenhouse gas emitter in the first instance, exacerbator pays in the second instance and beneficiary pays in the third instance. General Crown funding should be for the purposes of addressing equity issues.

57. **What support may be needed to help iwi/Māori, affected communities, individuals, businesses and the wider public participate in a managed retreat process?**

The public needs to be able to understand the risk of not retreating from an area, and how that risk might increase over time. They also need to made aware of the cost (and ongoing cost) of not retreating. In many cases, the cost of retreat and the use of nature-based solutions (such as making room for rivers) is much cheaper in the long term than 'strengthening' defences.

They should also be helped to understand the oopportunities and co-benefits of retreat (such as for conservation, recreation, and wellbeing, as well as cost) and the intergenerational benefits.

58. **A typical managed retreat will have many costs, including those arising from preparation (including gathering data and information), the need to participate in the process, relocating costs and the costs of looking after the land post-retreat. In light of your feedback on roles and responsibilities (question 57), who do you think should be responsible for or contribute to these costs?**

The cost of managed retreat should primarily fall on greenhouse gas polluters. For some associated risk reduction measures such as native forest and wetland protection and restoration a beneficiary pays approach may be appropriate because of the private financial benefit in reduced premiums that arises from the public investment.

59. **What do you consider the key criteria for central government involvement in managed retreat?**

The key criteria for central government involvement in managed retreat should be:

- Setting direction and supporting local and regional government
- Stepping in when local or regional government is failing to properly manage risks

- Financing climate change related managed retreat on a polluter (emitter) pays basis
- Delivering resilience through nature-based solutions
- Addressing social equity issues and ensuring Treaty of Waitangi obligations are upheld

60. **There may be fewer options for homes and community buildings (e.g., schools, churches, community halls) to move than businesses (e.g., retail and office buildings, factories, utilities) for financial, social, emotional and cultural reasons. That may suggest a different process for retreat, and different roles and responsibilities for these actors. Should commercial properties/areas and residential properties/areas be treated differently in the managed retreat process? Please explain why or why not.**

    As suggested, risks to homes and community facilities may need to be managed differently from commercial properties and businesses. This in recognition of the important role homes and community facilities play in delivering social and public benefits. Risks associated with commercial properties (including agricultural land) are different (private benefit) and accordingly should be treated differently.

    Even in areas where communities are safe, local services and infrastructure such as roads, power lines and pipes may become damaged more frequently and be more expensive to maintain because of erosion or increases in storms and rainfall. Local councils may decide to stop maintaining these services. Are there circumstances in which people shouldn't be able to stay in an area after community services are withdrawn?

    No comment.

Property transfer

In many circumstances, managed retreat will require the transfer of land. While planning rules can stipulate that the current use of land cannot continue (for example, residential use), this is not likely to be sufficient. This could create practical issues relating to access, rates, public health and ongoing management of the land (including responsibility and liability for harm caused by structures left on the land or inadequate clean-up of existing soil contamination).

Careful consideration should be given to Māori land (as described under Te Ture Whenua Māori Act) and land acquired through Treaty settlement processes. Preventing the use of these lands could be viewed by Māori as land confiscation and a serious breach of Te Tiriti by the Crown.

Separate processes providing for Māori land and Treaty settlement land may need to be considered to ensure these unique legislative arrangements are protected and the Crown's Te Tiriti obligations are upheld.

Consideration should also be given to other land with historical, cultural, social or religious significance (e.g., cemeteries or churches) to recognise their value to communities.

This raises several issues which will be worked through as part of detailed policy development for the Climate Adaptation Act. Your feedback on the questions below will help inform this work.

Questions:

61. In what situations do you think it would be fair for you to be required to move from where you live?

    No comment.

62. **Many residential communities are made up of a combination of renters, owner-occupiers and people who own a property and use it as a second/holiday house. Do you think there are reasons for these groups to have different levels of involvement in a managed retreat process?**

    No comment.

63. **It is not always obvious that an area is at high risk from natural hazards or the impacts of climate change. However, council risk assessments and increased data and information should make these risks clearer. Do you think different approaches should be taken for those who purchased properties before a risk was identified (or the extent or severity of the risk was known) and those who bought after the risk became clear?**

    Yes. Those who knowingly take on a risk should face a higher liability for the cost of adaptation/retreat if that is then required.

64. **Under what circumstances do you think it would be fair or necessary for government to take approaches with a greater or lesser degree of intervention or support?**

    Opportunities to develop co-benefits could be considered, such as where there is a significant opportunity to develop carbon sequestration wetlands, or restore a large ecosystem (e.g. braided rivers). Retreat could be integrated with govenrment initiativces and plans, such as Te Mana o Te Taiao, the Aotearoa New Zealand Biodiversity Strategy.

65. **How do you think land with historical, cultural, social or religious significance (e.g., cemeteries or churches) should be treated?**

    No comment.

Implications for Māori

Māori, whānau, hapū, iwi, communities and business entities have unique economic, social, and cultural systems that are strongly connected to the land and natural environment.

The broader social, economic, and cultural impacts of natural hazards and climate change on Māori communities are also expected to be disproportionate, due to the remote location and the economic status of many communities.

Many coastal Māori communities will be vulnerable to climate change impacts such as sea-level rise, high tides, and widespread coastal inundation as well as natural hazards including earthquakes, volcanic eruptions, flooding, landslides, storms and drought.

These changes will result in the erosion or loss of coastal infrastructure (e.g., roads, homes and utilities) and the loss of inter-tidal food gathering areas and sacred places (e.g., urupā and marae situated close to the coast).

There is the need to seek perspectives from Māori to understand more about how managed retreat will impact many of the Māori businesses and communities that rely on land, water, and natural resources for economic, social and cultural reasons.

Further understanding on how Māori see a managed retreat system working for Māori, and what partnership means in this context, is important for future policy work and for ensuring the Crown's Te Triti obligations are upheld.

Questions:

66. **Some Māori communities have needed to relocate as a result of events (including natural disasters) that have impacted their marae and wāhi tapu. These examples show that Māori communities are aware of the ways that climate change is affecting their marae, papa kāinga and wāhi tapu, and how relocation can be approached as a community, with engagement from iwi, hapū and whānau. The examples also demonstrate that climate change and natural hazard events are impacting coastal communities as well as inland communities located closer to rivers and lakes. How do you think managed retreat would affect Māori?**

    We feel this question would be best explored through discussion with iwi/Māori.

67. **Managed retreat has rarely occurred in Aotearoa, especially within Māori communities. However, there are examples of Māori proactively working to protect their marae, papa kāinga and wāhi tapu by either relocating or protecting and developing their current sites. In these instances, the focus was on protecting and preserving their taonga for future generations. What do you see as being most important in developing a managed retreat system for Māori?**

    We feel this question would be best explored through discussion with iwi/Māori.

68. **Māori land and Treaty settlement land have unique legislative arrangements. Restrictions and protections are placed on Māori land to meet a clear set of principles and objectives that recognise the cultural connection Māori have with the land and focus on land retention and use. Land that has been acquired through Treaty settlement processes is most likely to have cultural significance to a particular iwi or hapū and used to support the aspirations of their people. How do you think Māori land (including Treaty settlement land) should be treated?**

    We feel this question would be best explored through discussion with iwi/Māori.

The interaction with insurance

Insurance currently plays an important role in supporting New Zealand's resilience and recovery from natural hazards. However, sea level rise and increasing extreme weather due to climate change are likely to affect the ability to insure assets (particularly residential buildings). This may lead to 'insurance retreat' in some cases, which can include higher premiums, reduced quality (e.g., higher excesses or lower cover limits), and ultimately loss of access to insurance.

As described earlier, managed retreat is a process to strategically relocate assets, activities and sites of cultural significance away from at-risk areas within a planned period of time.

We seek feedback on how insurance could interact with a managed retreat policy. The interaction between insurance and managed retreat may differ depending on whether a retreat is pre-emptive or in response to a natural disaster.

Post-disaster managed retreat and the interaction with insurance

Insurance payments compensate parties for loss or damage resulting from an event covered by their insurance policy. While there may also be an opportunity for these payments to support a managed retreat, insurance payments typically only cover the value of the loss or damage to the building. This means that insurance may not cover the full cost of a managed retreat. Climate change may also exacerbate insurance retreat, in turn reducing the opportunity for insurance to support managed retreat post-event.

Insurers generally do not put restrictions on how claimants use insurance payments. This may enable insurance payments to be used to fund post-event managed retreat. However, insurers may limit their liability (e.g., refuse future cover) if a property is highly likely to suffer similar damage again. Options for managed retreat may be limited if an insurer decides to manage repairs for a property.

Question:

69. **How do you think post-event insurance payments could support managed retreat?**

    No comment.

Pre-emptive managed retreat and the interaction with insurance

As insurance becomes increasingly expensive or unavailable in at-risk locations, it may provide an important signal to better manage the underlying risk. Accordingly, insurance premiums and availability could influence decisions about managed retreat and may also encourage relocation decisions by individuals and communities outside the managed retreat process. However, as insurance contracts are typically for only one year, insurance premiums and availability may not provide a useful signal about increasing risks in the future.

Question:

70. **Should insurability be a factor in considering the option of managed retreat from an area?**

    It would seem sensible that insurance availability is a consideration.