Committee Members
Chair: Peter Haddock
Cr Andy Campbell
Cr Brett Cummings

Cr Frank Dooley
Cr Peter Ewen
Cr Mark McIntyre

Iwi Representatives
Francois Tumahai (Ngāti Waewae)
Jackie Douglas (Makaawhio)

THE WEST COAST
REGIONAL COUNCIL

PUBLIC COPY

Meeting of Infrastructure Governance Committee
(Te Huinga Tu)

Tuesday, 14 March 2023

On completion of Resource Management Committee Meeting

West Coast Regional Council Chambers, 388 Main South Road, Greymouth

and

Live Streamed via Council's Facebook Page:

https://www.facebook.com/WestCoastRegionalCouncil

INFRASTRUCTURE GOVERNANCE COMMITTEE MEETING

Infrastructure Governance Meeting
(Te Huinga Tu)

A G E N D A
(Rarangi Take)

1. **Welcome *(Haere mai)***

2. **Apologies *(Ngā Pa Pouri)***

3. **Declarations of Interest**

4. **Public Forum, Petitions and Deputations *(He Huinga tuku korero)***

5. **Confirmation of Minutes**
5.1 Council Meeting 14 February 2023

6. **Chairs Report (*verbal)***

7. **Regional CEOs**
7.1 Attachment 1 – Central Government Co-Investing Supporting in Flood Protection Schemes
7.2 Attachment 2 – Before the Deluge – Building Flood Resilience in Aeotearoa
7.3 Attachment 3 - Memo from Mike McCartney: River Flood Risk Resilience – Learnings from Cyclone Gabrielle

8. **General Business**

Move into Public Excluded

9. **Confirmation of Minutes –** IGC meeting 14 February 2023
Matters Arising
Actions

10. **Civil Defence debrief – Claire Brown**

11. **Contractual Matters**

12. **Financial Commitments**

13. **General Business**

H Mabin
Chief Executive

Purpose of Local Government

The reports contained in this agenda address the requirements of the Local Government Act 2002 in relation to decision making. Unless otherwise stated, the recommended option promotes the social, economic, environmental and cultural well-being of communities in the present and for the future.

Health and Safety Emergency Procedure

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If you require assistance to exit, please see a staff member. Once you reach the bottom of the stairs make your way to the assembly point at the grassed area at the front of the building. Staff will guide you to an alternative route if necessary.

THE WEST COAST REGIONAL COUNCIL

MINUTES OF THE INFRASTRUCTURE & GOVERNANCE COMMITTEE MEETING HELD ON 14 FEBRUARY 2023 AT THE OFFICES OF THE WEST COAST REGIONAL COUNCIL, 388 MAIN SOUTH ROAD, GREYMOUTH COMMENCING AT 15:26PM

PRESENT:
F. Dooley (Chair), A. Campbell, B. Cummings, P. Ewen, P. Haddock, M. McIntyre

IN ATTENDANCE:
H. Mabin (Chief Executive), S. Hoare (Project Manager, INOVO), Paul Berry (member of public), B. McMahon (Media)

1. WELCOME
Chair Dooley opened the meeting and welcomed all.

2. APOLOGIES
There was an apology received from Cr Birchfield.

Moved (McIntyre/Haddock) *that the apology received from Cr Birchfield be accepted.*

Carried

3. DECLARATIONS OF INTEREST
Andy Campbell registered a declaration of interest in regards to matters associated with the Wanganui River.

4. PUBLIC FORUM, PETITIONS AND DECLARATIONS
Paul Berry, a member of the public, spoke to the IGC of his concern regarding the flood risk to Westland Milk Products.

Chair Dooley summarised Mr Berry's' points as: "*Mr Berry has extreme concerns around the risk associated with the Hokitika Flood Protection Scheme, the Westland Milk Products manufacturing plant is extremely vulnerable, and has over 300 farms as suppliers and it is not only the largest employer on the West Coast it generates the most GDP and he is requesting Council act with urgency to mitigate the risk".* When asked if this was an accurate statement Mr Berry noted there was a dwelling in the midst as well.

Chair Dooley thanked Mr Berry for taking the time to voice his concern.

Chair Dooley noted that they had to work with Westland District Council, Westland Milk and Central Government to get this project across the line.

Mr Berry left the meeting at 15.40pm.

5. CONFIRMATION OF MINUTES
5.1 Confirmation of Minutes – 8 November 2022
There was one spelling amendment from Mr Hare to Mr Hoare.

Moved (Haddock/McIntyre) *that the minutes of the meeting held 8 November 2022 are a true and correct record.*

Carried

Matters Arising – there were no matters arising.

5.2 Confirmation of Minutes – 13 December 2022

Moved (Ewen/Campbell) *that the minutes of the meeting held 13 December 2022 are a true and correct record.*

Carried

Matters Arising – there were no matters arising.

6. CHAIRS REPORT

Chair Dooley said that he had not prepared a report, but referred to Mr Berry's presentation as it recognised the importance of the work, and its urgency, to be undertaken. Projects needed to be undertaken with more expediency than before.

7. WESTPORT FLOOD PROTECTION REPORT

Ms Mabin provided a verbal update on Westport flood protection. A work plan for the Westport Flood Protection Scheme was sought by Council at the December Council meeting to avoid unnecessary delay once the Kawatiri Business Case announcement was released.

A project team headed by Mike West, Project Manager for the Alma Road (Westport) temporary accommodation has been established. The team includes Steve Garner (who worked with Mike West), Matt Gardner and Gary Williams. Both Matt and Gary worked on Council's Technical Advisory group and have significant knowledge on this project. The draft work plan will be presented on 14 March before the next IGC meeting. The work plan will include any further urgent works flagged by Gary for the section of the river wall from the bridge back to the Kawatiri scour.

Chair Dooley asked what input the Westport Joint Committee had into this project team. Ms Mabin replied that the project team would be responsible to herself and therefore would be reporting through to this Committee, but she had not looked at the machinations of standing back up the technical advisory team that originally worked on the engineering and alignment and costing side for the business case, however at some point some recommendations would have to go to the Joint Committee chaired by Hugh McMillan.

Chair Dooley said that at the 14 March meeting he hoped that recommendations would be made to go through to the Joint Committee, Ms Mabin agreed but added that they still had no idea of the spend amount.

Moved (Haddock/Cummings) *that the verbal report is received.*

Carried

8. WANGANUI RIVER – RECENT EVENT

Chair Dooley spoke about the recent flood event at the Wanganui River which had taken out part of the stop bank. Council's Acting Infrastructure Manager had been asked to present a proposal to Council so that the emergency works could be addressed.

Chair Dooley stated that he did not want to leave the meeting today without an understanding of what is to be done about the immediate issues on the Wanganui River. A short discussion was held around the immediate and long-term concerns. More discussion would be held in the Public Excluded part of the meeting. A report from Gary Williams, with recommendations, was provided to Clrs.

WEST COAST REGIONAL COUNCIL

To: Chair, West Coast Regional Council

I move that the public be excluded from the following parts of the proceedings of this meeting, namely – items 9.0-11.1 (inclusive) due to privacy, commercial sensitivity and security reasons and that:

1. *Heather Mabin, and Marc Ferguson be permitted to remain at this meeting after the public have been excluded due to their knowledge of the subjects. This knowledge will be of assistance in relation to the matters to be discussed; and*
2. *That the Minutes Clerk also be permitted to remain.*

Item No	General Subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 7 of LGOIMA for the passing of this resolution
9.1	Confidential Minutes IGC Meeting – 8 November 2022 and 13th December 2022	These items contain information relating to commercial, privacy and security matters	To protect commercial and private information and to prevent disclosure of information for improper gain or advantage (s7(2)(a), s7(2)(b), and s7(2)(j)).
10-10.6	Contractual Matters	These items contain information relating to privacy and security matters	To protect private information and to prevent disclosure of information for improper gain or advantage (s7(2)(a) and 7(2)(j)).
11.1-11.5	Financial Commitments	These items contain information relating to privacy and commercial matters	To protect commercial and private information and to prevent disclosure of information for improper gain or advantage (s7(2)(a), s7(2)(b), and s7(2)(j)).To protect private information and to prevent disclosure of information for improper gain or advantage 7(2)(j)).

The public part of the meeting concluded at 3.52pm.

Report to: Infrastructure Governance Committee	**Meeting Date: 14 March 2023**
Title of Item: Te Uru Kahika	
Report by: Heather Mabin, Chief Executive	
Reviewed by:	
Public excluded? No	

Report Purpose

The purpose of this paper is to table to the Committee a memorandum from Te Uru Kahika (Regional and Unitary Councils Aotearoa) to Robert Pigou, Head of Kanoa, on 3 March 2023.

Report Summary

The River Engineers led an initiative in late 2022 to table to central government a request for immediate and ongoing investment in flood protection.

After Cyclone Gabrielle, this paper tables a Memorandum from the Te Uru Kahika to Kanoa that supports the immediate need for substantial co-investment in flood protection.

Draft Recommendations

It is recommended that the Committee resolve to:

Receive this report and note the Attachments.

Issues and Discussion

Background

In 2022 WCRC participated in an initiative by the River Engineers, led by Graeme Campbell, to secure funding for flood protection. This culminated in a request to central government for co-investment, see Attachments 1 and 2.

Current situation

In response to the impact of Cyclone Gabrielle, Te Uru Kahika, who represent regional and unitary councils, have sent a memorandum to Robert Pigou, Head of Kanoa.

This memorandum sets out reasons for co-investment and endorses the requested funding for the 2024 financial year which included a spend on West Coast, see page 13 Attachment 2. Namely:

- Cobden seawall $4m - 2024
- Hokitka river walls $2M - 2024
- Wanganui River $7M – 2024 & 2025
- Waiho River Stage 2 $10M - 2024

Attachments

Attachment 1: Te Uru Kahika Report, *Central Government Co-investment in Flood Protection Schemes – A report to support the request for Budget 2023 funding to build community climate-change resilience against flood risks*, dated December 2022.

Attachment 2: Te Uru Kahika, *Before the deluge – Building flood resilience in Aotearoa*, dated December 2022

Attachment 3: Memo from Michael McCartney, Convenor Te Uru Kahika to Robert Pigou, Deputy Chief Executive MBIE and Head of Kanoa, re: *River Flood Risk resilience – Learnings from Cyclone Gabrielle*, dated 3 March 2023

Te Uru Kahika
Regional and Unitary Councils Aotearoa

Central Government Co-investment in Flood Protection Schemes

- A report to support the request for Budget 2023 funding to build community climate-change resilience against flood risks

DECEMBER 2022

009

Summary

Floods are New Zealand's number one natural hazard. Flood risks across New Zealand are escalating, consistent with international trends. Te Uru Kahika members (regional and unitary district councils) are fully committed to meeting their flood protection responsibilities. They invest around $200 million each year to sustain and improve related infrastructure across Aotearoa.

In a climate-changing world, that investment – together with other flood risk mitigation measures, cannot on its own provide the level of security, 'service level' and the flood risk mitigation / climate change resilience now expected of flood protection schemes. Increased co-investment, alongside a suite of broader measures, will be required to enable communities to meet this challenge.

A step change is required. Measured urgency is needed to adapt existing flood protection measures to be fit to meet present and future risk management expectations. It is clearly in the national interest that these adaptations occur.

With some minor exceptions, there is a good understanding of what interventions are now required at all locations. The relationships, capacity and capability exist, at a good and improving standard within central and regional public agencies and the private sector, to enable timely and effective execution of a national programme delivered at the regional level. Increased Government and council co-investment is required to build community resilience against flood risks.

Our request

There is an overwhelming national interest in Government assisting to resolve Aotearoa's flood protection challenge. Te Uru Kahika request Government to partner with it on a two-step journey:

- Step one: Commit $257m, via Budget 2023, alongside regional council co-investment, to the collaborative delivery of a three-year programme of 92 carefully selected flood protection projects.

- Step two: Commit to a long-term collaborative, multi-tool, and well-funded co-investment approach to the task of building community resilience against flood risks.

Benefits

The benefits for Government of co-investing in the 'step one' second tranche of flood protection schemes are substantial:

- More vulnerable communities will be protected.
- The fiscal impacts of more frequent and severe floods will be mitigated.
- The return on investment is considerable ($1 spent protecting a community avoids $5-$8 in clean-up costs afterwards).
- The intangible benefits – in terms of reduced health, social, cultural, and environmental impacts – are significant and can be long lasting.
- The climate is rapidly changing. The frequency and magnitude of floods is accelerating. Flood protection is the primary defense / adaptation tool for effective mitigation of the increased risks posed by climate change.
- The present high level of private flood risk insurance will be sustained. This will reduce the substantial contingent liability for the Government arising from both property and larger community recovery costs.
- There are a wide range of Government owned and nationally strategic assets such as lifeline utility networks, roads, schools, and hospitals that will be protected.
- Relevant and necessary Te Uru Kahika capacity and capability will be retained and enhanced rather than diminished.
- The effective functioning of flood-prone regional economies and communities will be sustained by providing safety, security, connectivity, and reliability.

Current 55 Kānoa / regional council projects

We have made demonstratable progress in implementing the current 55 community resilience projects, funded as part of the Covid-19 recovery response. These projects have delivered on Government and community objectives in an efficient and cost-effective way. This confirms the capability and proven reliability of Te Uru Kahika member councils to deliver projects of this type.

We now wish to build on this previous work with a second tranche of 92 projects. For these new projects, we wish to continue to work under the governance / partnership oversight and guidance provided under the 'Resilient River Communities' banner by Kānoa. Effective relationships and competencies have been developed. These should be sustained.

Forward programme

FIRST STEP: CO-INVESMENT IN 92 ADDITIONAL FLOOD PROTECTION PROJECTS

We have worked with Maven Consultants Ltd to prepare a business case to support the $257m we have requested from Government to enable the proposed 92 new projects to be delivered more quickly than otherwise would have been the case. The total cost of these projects is $428m.

The requested $257m reflects a cost share arrangement close to that used in the first tranche of projects.

SECOND STEP: LONG-TERM PROGRAMME

Our previous work suggests future flood protection needs will cost $350m pa. Regional councils have recently increased their investment commitment from $175m pa to $200m pa. to help achieve this objective. The annual shortfall of $150m was the suggested amount required as part of Government's long-term co-investment.

More collaborative work is recommended as being necessary, to refine the proposed long term Government co-investment share. This additional work would cover the:

- Preferred service level for all the 367-flood protection and river management schemes across Aotearoa. (This service level is expected to be 1:100 or better).
- Confirmed estimates of the cost required to achieve that level of service.
- Priority to be attributed to projects across Aotearoa.
- Cost share between Government and Te Uru Kahika members across different parts of Aotearoa.
- Costs saved because of flood harm / damage averted.
- Relationship between proposed flood protection investment and measures that avoid, accommodate or retreat from floods.
- Relationship between flood protection investment and environmental / Te Mana O Te Wai / give the river 'more room to move' initiatives.
- Relationship between flood protection investment and Waka Kotahi and or KiwiRail investment infrastructure improvement plans.

The end point of this second step would be the accelerated achievement of improved community resilience against flood risks. The critical ingredient to the achievement of this objective is the provision of an agreed quantum of more permanent Government budgetary assistance. This will give certainty to communities and business (including the insurance companies) about investing in the future of the regions.

COLLABORATION TO ACHIEVE COMMUNITY RESILIENCE AGAINST CLIMATE CHANGE / FLOOD RISKS

Government consideration of policy for building community flood risk resilience is currently diffused between MfE, Treasury, NEMA, DIA and MBIE. The Insurance Council, Te Waihanga (Infrastructure Commission), the EQC (Natural Hazards Commission / Toka Tū Ake) and the Productivity Commission also have a vital interest in this subject. Central to the deliberations of all these parties are the policy and delivery interests of members of Te Uru Kahika.

A leadership platform is required to draw these parties together. The 2019 / 2020 work of the multi-party / DIA supported ‘Community Resilience Steering Group’ set the precedent for the desired collaborative approach. We call upon you to re-convene a similar platform to guide the proposed ‘second step’ work.

Recommendations to government

1. Make provision for $257m in Budget 2023, for co-investment in a three-year delivery programme for 92 additional flood protection projects.

2. Apply the current successful governance / partnership oversight provided under the ‘Resilient River Communities’ banner by Kānoa to the proposed second tranche of 92 projects.

3. Work with Te Uru Kahika to implement a longer-term programme and co-investment arrangements capable of building a comprehensive approach to enhancing the resilience of our communities against flood risks.

4. Re-constitute a collaborative platform like the previous ‘Community Resilience Steering Group,’ to consolidate future community flood risk resilience recommendations.

Figure one: Kaitāia – new high-flow-level spillway, constructed with assistance of Kānoa funding. Prevented flooding from a 1 in 100 year event on 18 August 2022. Previously only had a 1 in 20 to 30 year protection level.

Back story

Previous progress

Te Uru Kahika has been attempting to progress the case for Government co-investment in flood protection schemes since at least 2018. Our efforts have been well received, but we are yet to secure the necessary longer-term decisions, co-investment funding and partnership certainty.

The acceleration of the effects of climate-change induced high-magnitude floods mean that now is the time for action. That said, the Government's commitment of $217M (2020) toward the cost of the 55 selected 'ready to go' flood protection projects were much welcomed by Te Uru Kahika and affected communities. That joint programme is now over half completed. The value of the investments is already demonstrably evident.

The chronology of Te Uru Kahika efforts, and others, to progress the case for Government co-investment may be summarised as follows:

- Hiding in Plain Sight, Tonkin + Taylor, 2018: documented the characteristics and value of New Zealand's 367 flood protection schemes.
- Central Government Co-investment in River Management for Flood Protection, Te Uru Kahika, 2020: documented the case for co-investment.
- Investing in Natural Hazards Mitigation, NZIER, 2020: provided forecasts and findings about the return on investment in flood risk mitigation.
- Covid recovery funding, 2021: provided for the injection of $217M capital into essential flood protection works as part of the Covid-19 recovery 'shovel ready' programme.
- Co-investment Supplementary Report, Te Uru Kahika, January 2022: provided information drawn from Blenheim, Ashburton, and Westport case studies to expand the evidence base in support of Government co-investment in flood protection.
- Co-investment in Westport's Resilience, a proposal to Hon Nanaia Mahuta, prepared by West Coast Regional Council, Buller District Council and Ngāti Waewae, July 2022: established the business case to support Government co-investment in building community resilience against flooding at Westport.

Investment logic

The logic to support Government co-investing in a second tranche of flood protection projects is strong. Our summary of this rationale is displayed in Figure three. Several elements are particularly salient:

Our destabilised climate is causing bigger rain events, with bigger river flows, more flooding, greater flood damage and more harm to our communities. Recent Westport, Nelson and Tairāwhiti Gisborne floods are still very clear in the minds of those carrying the on-going burden of these events. Our current flood protection infrastructure was not designed for this emergent level of flooding.

Flood protection is the first line of defense for our communities.

- Research undertaken by NZIER (2020) confirms the natural hazard management cost-benefit of focusing attention on flood protection structures.
- Research undertaken by Tonkin + Taylor (2018) confirms that:
    - $11b of annual benefits accrue because of flood protection schemes.
    - The value of the assets and productive land protected by current schemes is increasing.
    - A total of 1.5 million hectares of land are protected by New Zealand's 367 Schemes.
    - In the meantime, $160m of costs are incurred annually by those areas without adequate flood risk resilience measures.
    - A total of 675,000 New Zealanders live in flood prone areas.
    - National and international research shows $5-$8 dollars of costs are avoided for every $1 invested in flood protection.

We need to apply a comprehensive approach to the task of building the resilience of our communities against flood risks.

- New instruments have been developed as part of the resource management legislative programme.
- Managed retreat will play a critical future role in community adaptation to flood risks, at some locations.
- Te Mana O Te Wai and environmental values need to be more clearly reflected in the design of future schemes. We note the 'river needs more room to move' at some locations.

All these measures will take some time to be put in place. In the meantime, the pace of increase in the frequency and magnitude of flood events is accelerating. Projects (such as the 92 listed in our proposal) with clear and enduring benefits are required now as a bridge to allow the proposed more comprehensive set of flood risk mitigation tools to be rolled out.

There is a distinct national interest and a wide-ranging set of crown assets protected by flood protection schemes. Case study research carried out in Ashburton, Westport, and Blenheim (Te Uru Kahika, 2022) calculate the value of these Crown assets at over $1b at each of these locations. Admittedly, much of this value is accounted for by expensive road and rail assets, but the protection provided to schools and hospitals etc., cannot be forgotten. The Crown does not pay rates. Crown assets are therefore protected at no cost to the Crown.

Regional and unitary district councils have proven their capacity and capability to deliver flood protection scheme projects. With the help of Kānoa, the 55 projects funded as part of Government's Covid recovery programme are being delivered on-time and within budget expectations. It is vital that the established pipeline of engineers, contractors, council works etc., enabling this to be achieved, is sustained. Governance and reporting systems are already in place. These can be taken forward and applied to the second tranche of 92 projects.

The Insurance sector is increasing its premiums and is threatening to withdraw services from some flood prone areas. The important 'risk transfer' role played by the insurance sector depends for its success on how well flood risk itself is managed. IAG have clearly noted (press release, 18 August 2022) they will 'remain in the game' if flood protection structures are put in place. The impacts on the economy of the withdrawal of the insurance sector would be immense. New Zealand insured flood losses in the last five years have been double those of the previous five years (pers. comm., Tim Grafton, 30 November 2022).

Business case

A business case '*Before the Deluge: Building Flood Resilience in Aotearoa*,' has been prepared for Te Uru Kahika by Maven Consultants Ltd. This business case provides strong support for the requested $257m Government co-investment toward the cost of a second tranche of 92 flood protection project throughout Aotearoa.

The *Before the Deluge* report records a wealth of information to establish the strategic, economic, financial and management / implementation case for this co-investment. Highlights include the information provided about the:

- Current state of flood protection in Aotearoa, the related / evolving climate-change-induced social, economic, cultural, and environmental challenges and the flood harm faced by New Zealanders.
- Implications of applying a 'deprivation' approach to determine the priority to be accorded to flood protection projects.
- Details about the 92 projects put forward by Te Uru Kahika members as part of the second tranche of projects, and the related delivery roadmap.
- Benefits achieved from the central government's co-investment of $217m into the first tranche of 55 community resilience building projects – and what more could be achieved from a similar commitment to a second tranche of 92 projects.
- Emergent insurance sector decisions and implications for Aotearoa.
- Longer-term pathway opportunities, including how the PARA approach to building community resilience against flood risks may be applied, and the importance of a long-term Government co-investment approach, to achieve less harmed / more resilient river-side communities and land uses.

Prioritisation

As noted previously, Te Uru Kahika is seeking a Government contribution of $257m toward 92 projects, with a total cost of $428m. These projects have been identified via a robust Te Uru Kahika process. Members of Te Uru Kahika are confident they can meet their share of these costs. The listed projects are 'ready to go'. Te Uru Kahika members have the capacity and capability to deliver on these additional projects. They will be completed within three years of co-investment contracts being signed.

In selecting these projects, emphasis has also been given to the need for these projects to:

- Provide protection to lower socio-economic communities.
- Accelerate the provision of an increased level of service / protection against the accentuated flooding effects of climate change.
- Reflect Te Mana O Te Wai / environmental considerations.

Our emphasis toward projects serving the interests of lower socio-economic communities reflects the policies recorded in the July 2020 Cabinet Paper. It also reflects the work commissioned by DIA who attempted to define

the number of communities throughout Aotearoa suffering ‘affordability’ challenges such as those being experienced in Westport.

Cost apportionment

In the past, Government has applied a considered and sensible approach toward co-investing in flood risk mitigation:

- The 55 ‘Shovel Ready’ flood risk mitigation projects funded in 2020 by Central Government, as part of their Covid recovery programme, received a cost share of between 64% (for comparatively wealthy regions) and 75% (for less wealthy regions).
- Prior to the early 1990s, the capital cost of the substantial river management and flood protection schemes put in place by Catchment Boards, was commonly supported at levels of up to 75% by Government.
- The Te Uru Kahika report (January 2022) called for co-investment of up to 75% toward the cost of whole of catchment climate-change-adaptation approaches and slightly lesser rates for maintenance / operational expenditure.

The Business Case, developed by Maven Consultants Ltd and put forward by Te Uru Kahika to support the request for co-investment via Budget 2023, considers a range of approaches. In essence, this is based on Government co-investment of either 60% - for most districts, or 75% - for less-well-resourced districts.

This apportionment has been calculated on the assumption that $257m is the maximum that central government may allocate to the proposed second tranche of flood protection projects. If additional funding was available from Government, then the preference of Te Uru Kahika would be to establish a cost apportionment ratio equaling that applied to the funding provided for the previous tranche of 55 post Covid-recovery projects i.e., 64% - for wealthier districts, and 75% - rating challenged / less-wealthy districts. If this cost share apportionment was applied, then Government’s co-investment share of the projects would total $289m.

Te Uru Kahika members also note they have other projects in their infrastructure strategies that, with little additional effort, could be added to the 92 put forward in the Business Case for accelerated delivery. We suggest that every reasonable opportunity should be taken to deliver improved flood resilience, to as many locations as possible, as soon as possible.

Westport

The question of how the co-investment request from West Coast councils will be addressed by Government is not clearly apparent to members of Te Uru Kahika.

Te Uru Kahika members remain totally supportive of the West Coast councils’ request for Government co-investment of $45m. This is viewed as being a fair cost share toward the $56m total cost of the broad spectrum of community flood risk resilience initiatives they have identified.

Te Uru Kahika members request that Government consider Westport’s case in parallel, but in addition to the request for $257m for accelerating implementation of the proposed 92 proposed. Westport is a regretful example of a ‘bottom of the cliff’ response and recovery as opposed to the proposals herein. It should receive co-investment funding as a separate consideration to the request for $257m national funding outlined in this report.

Case studies of the benefit of co-investment

Kānoa and Te Uru Kahika have jointly prepared a ‘half-time’ report on the progress made, and the benefits achieved, from the 55 Covid-recovery projects that received earlier co-investment support from Government. Salient indicators of the benefits achieved from these projects so far include:

- An additional 8,642 ha of community resilience achieved against flood risks.
- 650 local jobs created.
- 835 ha of wetland created or enhanced.
- $8.4m of Māori business contract value allocated.
- $50m of potential flood-harm from the 1:100-year 18 August 2022 event averted in Kaitāia.
- Flood risk resilience provided to housing, businesses, state highways and local roads, the airport, the hospital, several Marae and 10,000 ha of highly productive horticultural, viticultural, and farming land across Gisborne - as part of the Waipaoa flood control scheme upgrade.

Conclusion

Climate change is causing more frequent and more intense floods. Increases in flood risks come with a social, economic, cultural, and environmental cost that can no longer be shouldered by members of Te Uru Kahika on their own.

The case for Government committing to a second tranche of flood protection projects, as part of Budget 2023, is clear. Measured urgency exists to improve community climate resilience to flood risks.

A longer-term collaborative approach to building community climate resilience against flood risks is also required. Te Uru Kahika members look forward to partnering with central government agencies, and others, to achieve this objective.

Figure two: Westport flooding, July 2021

Figure three: Investment logic

Te Uru Kahika
Regional and Unitary Councils Aotearoa

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Te Uru Kahika
Regional and Unitary Councils Aotearoa

Before the deluge

Building flood resilience in Aotearoa

Investment summary

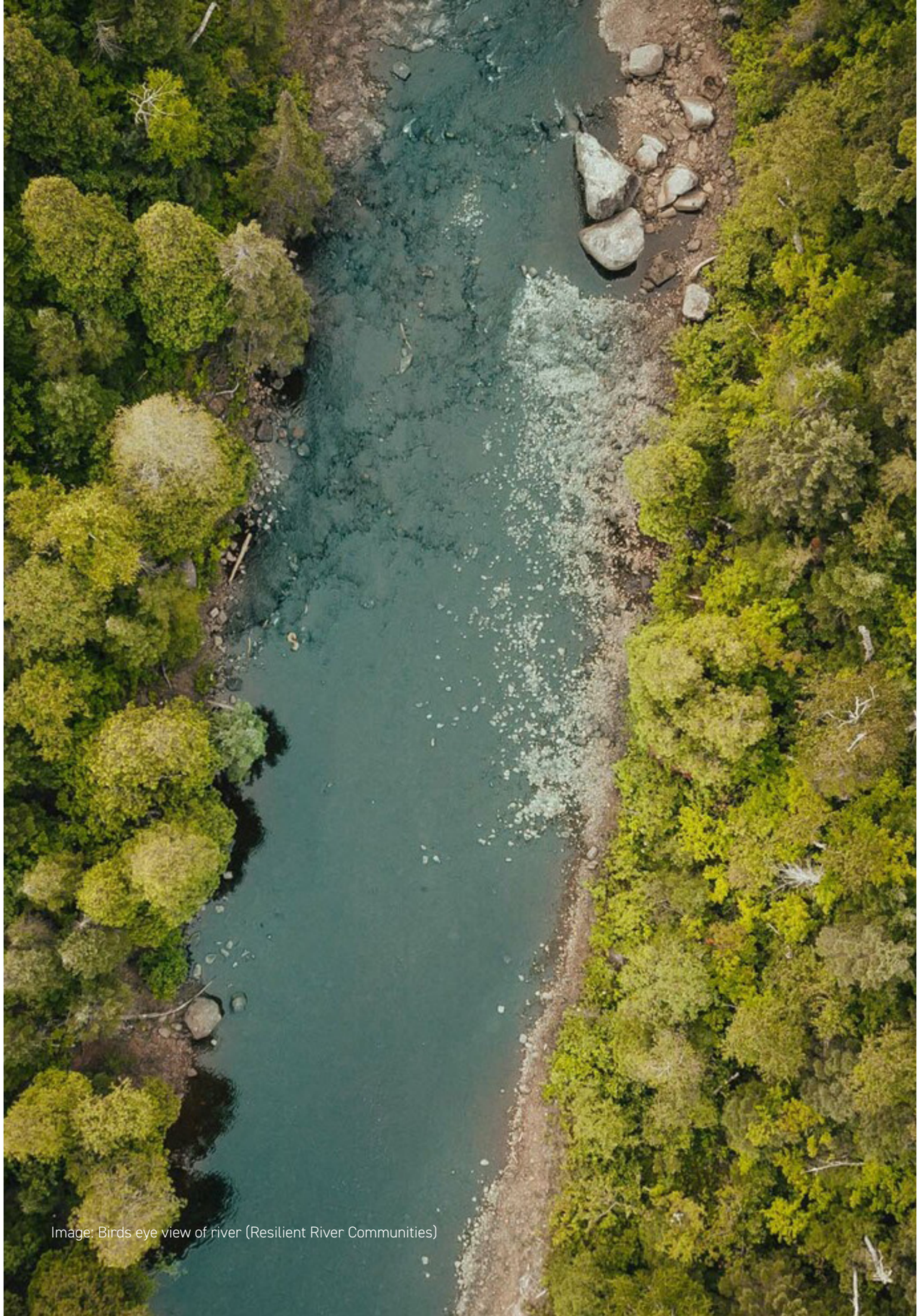


Image: Birds eye view of river (Resilient River Communities)

Resilient River Communities

The MBIE/Kānoa/Regional and United Council 'Climate Resilience Flood Protection Programme' is developing the way forward for central government co-investment in flood resilience.

The 16 regional and unitary councils across Aotearoa are tasked with the integrated management of land, air, and water resources; supporting biodiversity and biosecurity; provision of transport services regionally; and building community resilience against climate change and natural hazards such as floods.

Collectively the regional sector's efforts are represented - through council Chief Executives - under the newly established identity Te Uru Kahika. Te Uru Kahika draws on expertise and local knowledge to promote the wellbeing of our environments and our communities.

In recent years, Te Uru Kahika has boosted its capacity to prepare for and respond to the impacts of climate change and natural hazards. The increase in flooding expected due to climate change has been a particular focus of this collective, as well as for the councils themselves.

River management and flood protection schemes, managed by the regional sector, have a critical role in mitigating against the full consequences of damaging flood events, the most frequent natural hazard experienced in New Zealand. This has been led by the River Managers' Special Interest Group (SIG), comprised of regional and unitary councils working collaboratively to increase community flood resilience.

However, climate change is expected to lead to more frequent and intense floods, and adapting to these increasing risks in the face of climate change comes with costs that can no longer be shouldered at a regional level alone.

In 2021, Resilient River Communities was launched as a joint initiative between Kānoa (the regional Economic Development and Investment Unit), regional and unitary councils. The Kānoa Climate Resilience Flood Protection Programme initiative was aimed at developing and upgrading crucial river management and flood protection schemes via a co-investment partnership approach with central government.

Through this initiative $312 million worth of flood resilience projects are being delivered across Aotearoa, with a $217 million co-investment from Kānoa. In addition to the flood resilience benefits, these schemes have also enabled social procurement outcomes including the creation of jobs, new businesses, and opportunities for local communities.

Alongside this, in recent years Te Uru Kahika, through the River Managers' SIG, has led a wider programme of work establishing the need and urgency for longer-term central government co-investment in flood protection and management. This included work lead by Tonkin+Taylor in 2018 and a substantive sector report published in 2020.

Thus far, these efforts have facilitated dialogue with key Ministers and officials, including the release of a 2020 Cabinet paper which set out a proposed framework for central government to take on a more active stewardship role in improving community resilience to flood risk. However, a co-investment commitment has not been secured to date.

Given the upcoming resource management reforms, alongside the growing risk of flood risk, it is timely to revisit the matter of co-investment that will provide pathways to long-term solutions for Aotearoa.

Image: Hutt River

At a glance

An overview of the challenge and the necessary response.

A significant investment is required.

Te Uru Kahika is seeking co-investment of $257.2m from central government alongside $171m from regional councils to accelerate delivery of 92 urgent shovel-ready projects.

Continuation of existing Covid recovery funding allows:

- The momentum developed over the last few years to be maintained
- More vulnerable communities to be protected
- Minimising and/or avoiding the fiscal impacts of more frequent and severe floods.

The case for taking immediate action is irrefutable.

Both national and international studies show the return on investment from well-designed flood protection works is considerable: $1 spent protecting a community avoids $5-$8 in clean-up costs afterwards, before the intangible benefits - in health, social, cultural, and environmental impacts - are considered.

The climate is rapidly changing. The frequency and magnitude of floods is accelerating.

There is a distinct national interest and national assets to be protected.

Co-investment from central government acknowledges shared accountabilities.

Regional councils have demonstrated their capacity and capability to deliver flood protection infrastructure.

This remains the first line of defence against flood risks, and a primary means of building community resilience until other longer term measures are put into effect.

The role of this investment case

How this investment proposal relates to other initiatives.

Considerable work has been done over the last few years to assess and quantify the risks and investment approaches needed to address them, as the diagram below shows. The work we are planning builds on the analysis and co-investment pathways developed between central government and Te Uru Kahika over the last few years, with the intention of providing Aotearoa with a pragmatic roadmap for flood resilience over the coming decades.

Hidden in plain sight | 2018

Tonkin + Taylor report documenting extent and value of flood protection schemes in Aotearoa

Co-investment proposal | 2019

Proposed approach from regional councils to co-funding essential infrastructure

NZIER report | 2020

Economic assessment of the likely costs and benefits of flood mitigation showing premium return from investment in flood risk mitigation, compared to that of other natural hazards

COVID recovery funding | 2020

$217m capital injection for essential works as part of the COVID recovery programme

Co-investment supplementary report | January 2022

Updated proposal from Te Uru Kahika for co-investment in flood protection schemes, demonstrating (through three case studies) the value of Crown assets being protected by schemes

Westport business case | June 2022

The business case to co-invest in flood protection measures in response to the catastrophic Westport floods of July 2021

Co-investment proposal | December 2022

The proposal for co-investment of $257.2 million in 92 urgent flood protection projects over the next three years

Delivery projects | July 2023

Commencement of the majority of the 92 flood protection projects across Aotearoa

Sustainable co-investment model | July 2023

Development of the long-term approach to sustainable co-investment in flood protection under the PARA framework commences

FOR CONSIDERATION ➤ V1.0 ➤ 7 DECEMBER 2022

The current state of flood protection

Flood protection is crucial to the economic, social, cultural, and environmental wellbeing of Aotearoa.

Flooding is the most common natural hazard in Aotearoa, with a major flood event occurring on average every eight months. Across the country around 675,000 people – or 14 percent of the population – live in areas prone to flooding.

Floods impose an annual cost to the nation of over $160 million in direct economic damage and clean-up costs, and a much higher toll in wider economic, social, cultural, and environmental impacts. It is also one of the most avoidable hazards and can largely be mitigated through flood protection schemes that reduce the risk of flooding.

Flood protection can be understood as a network asset that may include stopbanks, floodgates, pump stations, diversions, and river management works; all of which work together to protect areas where people live, work, and play.

There are currently 367 flood protection schemes in place, representing a combined capital value of $2.3 billion, with $200 million in annual operational expenses to maintain current levels of service. Together, these schemes directly protect around 1.5 million hectares of land and capital across the country, including the most highly populated regions in the country and many areas of significant cultural and social value, such as marae and urupā.

The map at right provides a snapshot of key flood-related metrics, including the estimated benefit value (in $billions) of these schemes for each region across the country. Consequently, these tend to be areas with the highest levels of economic activity and are therefore central to New Zealand's economy.

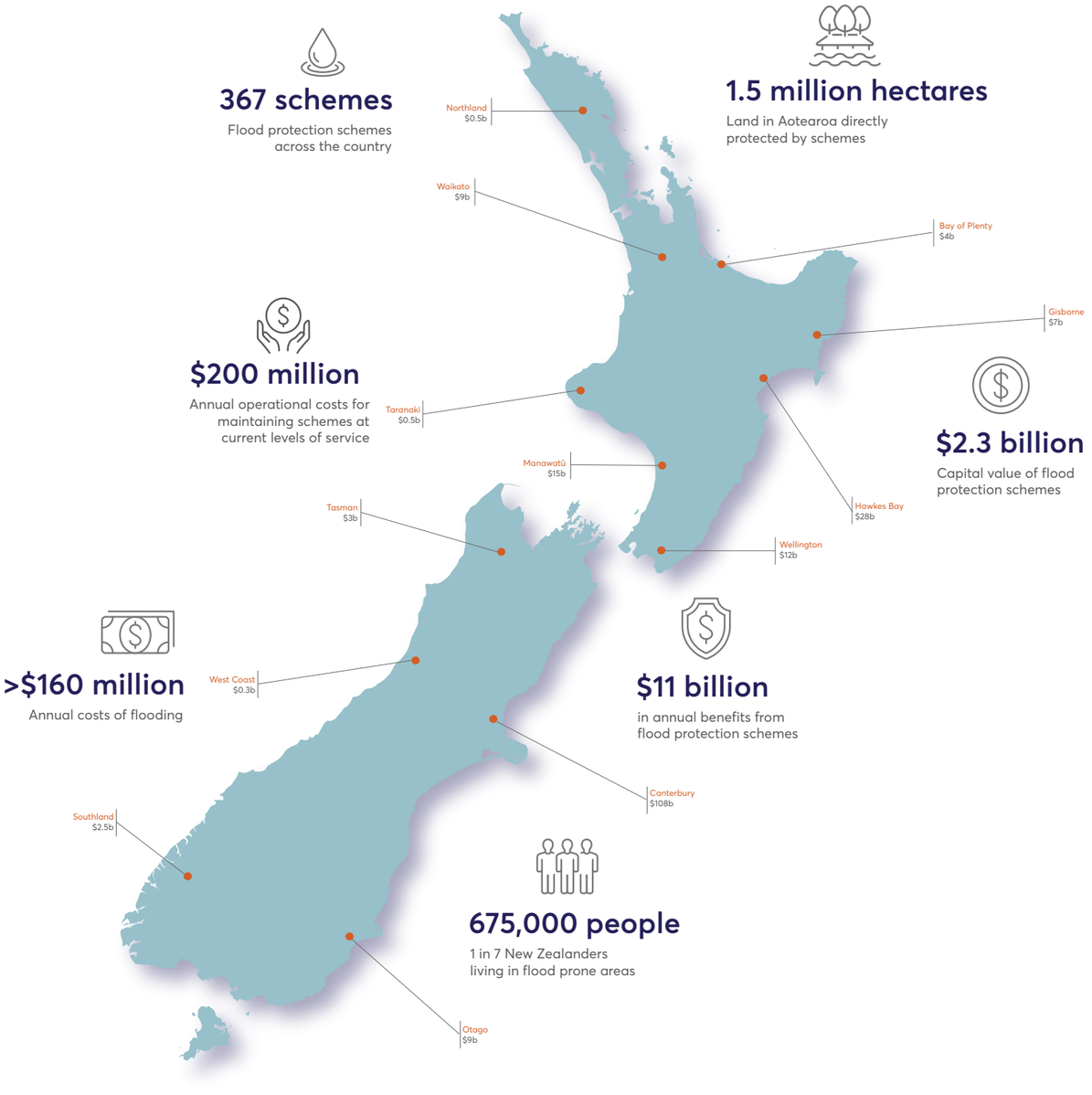
In this way, flood protection schemes comprise a core economic enabling infrastructure and are crucial to the economic, social, cultural, and environmental wellbeing of Aotearoa.

Schemes are largely funded through targeted rates and operated and managed by local and regional councils. Yet, they also provide wider benefits in protecting Crown assets on non-rateable land, and critical national infrastructure such as three waters, transport networks, and energy and telecommunication links.

Indeed, the total value of these benefits to the nation have been estimated at $11 billion each year. This is a benefit-to-cost ratio of around 5:1.

Despite the billions of dollars in benefits, flood management and protection has been largely absent from conversations with central government over the last three decades

This current funding model is neither sustainable nor fit-for-purpose in the face of growing challenges around climate change and the ability of local ratepayers to fund the necessary level of investment.



Source: Tonkin & Taylor (2018). Hiding in plain sight: An overview of current practices, national benefits and future challenges of our flood protection, river control and land drainage schemes. Report for River Managers' SIG.

The evolving scale of the challenge

Climate change impacts and our current funding approach are exacerbating our risks.

Flooding poses very significant risks to lives, livelihoods, communities and the economy, as we continue to see with every major flooding event. However, there are three main indicators that the situation is about to become worse.

First and foremost, existing flood protection schemes require ongoing maintenance and repair to maintain the levels of service and/or renew the asset for upcoming decades. Many schemes need major upgrades in order to continue functioning as intended. This does not include the implementation of new schemes and initiatives to meet current and future needs.

However, flood protection schemes are primarily funded through a ratepayer base, and increasing rates to fund this necessary work is neither viable nor equitable. In the absence of any central government funding, the affordability and continuity of flood protection schemes – so crucial to protecting our nation's assets – remains under threat.

Second, the assets protected by these schemes have steadily increased in value over time. Adjacent urban development has also intensified. This means that the damage from a major flood event will incur significant wellbeing and economic costs, which are rising over time. Traditionally some of these costs have been recouped via insurance, although pay-outs do not cover the full extent of damage nor do they reduce the future risk of flooding.

Third, and relatedly, the impacts of climate change are creating further risks to our flood resilience. Both NIWA and international evidence indicates an increased frequency and severity of extreme flood events, alongside rising sea levels which pose threats to coastal communities.

Increasing flood events lead to successive increases in insurance premiums as well as the partial or full withdrawal of cover by insurance companies, as already seen in parts of the United States.

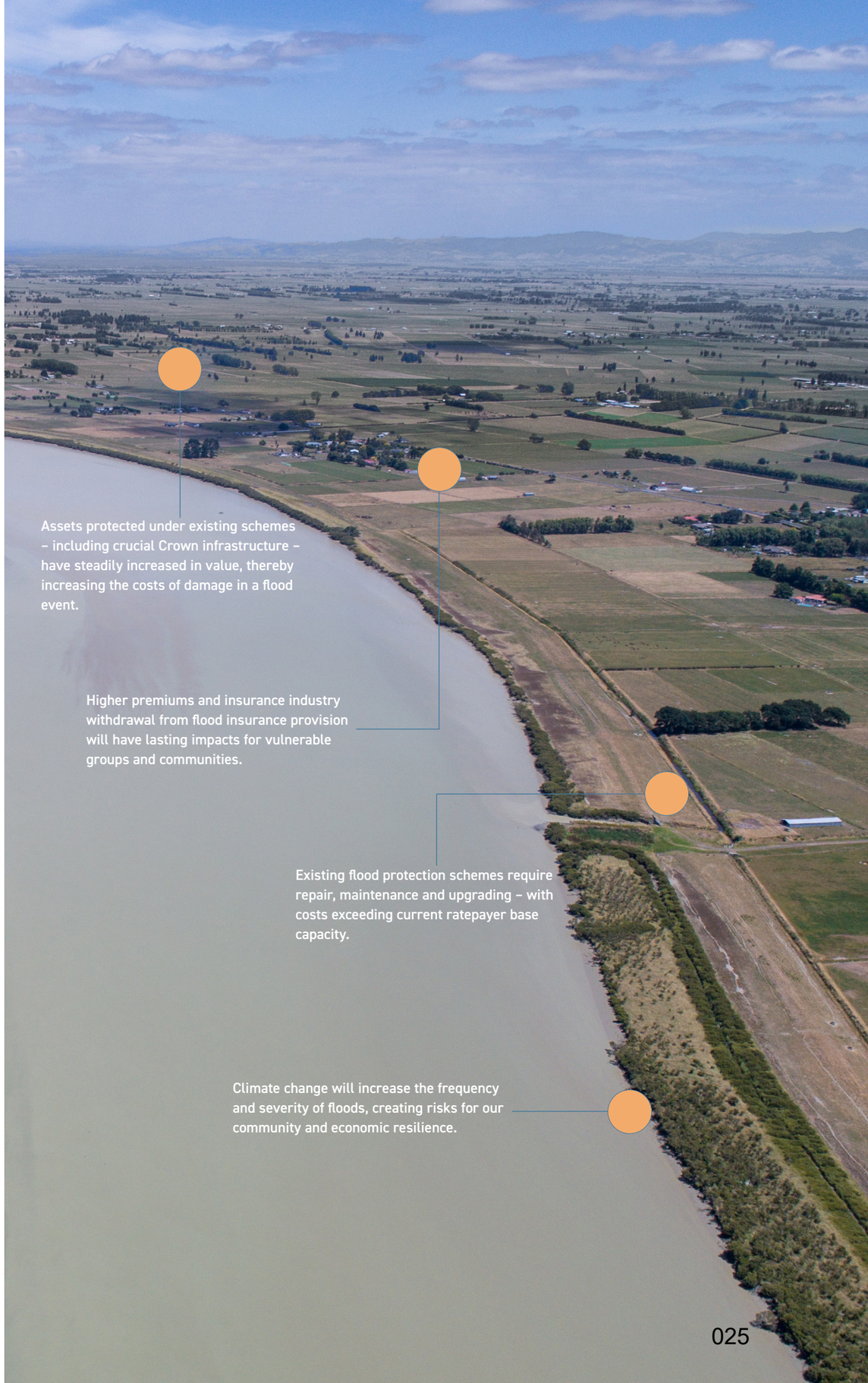
Indeed, recent research has conservatively estimated that New Zealand will see very significant insurance premium hikes within the next ten years, with more than 10,000 houses across Wellington, Auckland, Christchurch, and Dunedin experiencing full insurance withdrawal by 2050. While the Insurance Council of New Zealand has previously signalled their own commitment toward maintaining insurance support for high risk communities, this is contingent on broader national-level commitments toward flood risk mitigation.

Higher insurance premiums and retreat will create lasting impacts for vulnerable communities who will be unable to rebuild nor have the means to relocate after a flood. This is just one way climate change will disproportionately be felt those most vulnerable in society, with enduring impacts on intergenerational wellbeing.

Flooding also represents a significant liability for the government through disaster response and funding via agencies such as NEMA. The projected costs of climate change on storms and flood liability alone is conservatively estimated to increase Crown liability to between $231 and $261 million per year by 2050.

Together, these lines of evidence suggest materially increased risks to Aotearoa's wellbeing and economy in coming years. Mitigating these foreseeable risks through central government co-investment will serve as the nation's first line of defence against climate change-induced flooding, with benefits for every New Zealander.

Sources: NZIER (2020). ***Investment in natural hazards mitigation: Forecasts and findings about mitigation investment.*** Report to DIA; Storey, B., Owen, S., Noy, I. & Zammit, C. (2020). ***Insurance Retreat: Sea level rise and the withdrawal of residential insurance in Aotearoa New Zealand.*** Report for the Deep South National Science Challenge, December 2020.



Impact on communities: The case of Westport

There are significant and long-term impacts on our communities and economies from flooding events.

Flooding creates detrimental economic, social, cultural, and environmental impacts for communities, as illustrated by the recent Westport floods.

Floods create significant financial costs in damage, recovery and response, and wider economic damage

The July 2021 floods alone saw more than 2,000 people evacuated from over 826 properties. Nearly a quarter of the town's housing stock was damaged or deemed unsafe for occupation, representing around $88 million in insurance claims settled to date.

Unfortunately, while the town was still recovering, in February 2022 another major flood led to further evacuations, damage to homes and infrastructure, access to the town being cut off, and a State of Local Emergency being declared.

Initial damage assessments carried out in late February estimated between $21.5 and $43 million in damages from the two flooding events. This includes costs in damage to crucial infrastructure such as roading and water supply, removal of domestic waste, and damage to at least 70 farms district wide.

More than a year on from the July floods, less than one fifth of homes have been fully repaired and the costs of recovery have been estimated at nearly $100 million. Unfortunately, these damage and recovery costs will fall to the community in a region with high levels of socioeconomic deprivation.

Beyond the immediate costs incurred from flood damage, there is also the sizeable cost associated with Government responses to flooding events, such as deploying the New Zealand Defence Force, emergency services, and other relief agencies. While these have not been quantified for the Westport case, data from 1976 to 2004 indicates government expenditure on civil defence responses for floods alone averaged about $15 million per year.

There are also broader economic costs associated with social and business disruption, such as accommodating displaced residents, losses in income and production from businesses being unable to operate, disruption to schooling, and damage to natural and cultural heritage. Ultimately these costs are subsequently borne by the entire nation through higher insurance premiums as well as tax increases to fund repairs and future flood response.

Floods also create significant social and environmental impacts on wellbeing

The impacts of flooding on families and communities can extend well beyond the 'recovery and rebuild' stage. Aside from potential injuries and loss of life, there is also the enduring psychological and emotional toll on affected communities.

A recent news article following Westport residents a year on from the July floods shows just how much of a daily stressor it can be, and how long it can take for a community to recover from a major flood event. Long term, these can affect people's tolerance of flood risk and their willingness to live in certain areas.

Flooding and other natural disasters can also exacerbate inequities, especially when there is a reliance on insurance-based transfer of risk, as is the case in New Zealand. This is because low-income and disadvantaged households disproportionately live in low-cost housing/rentals less resilient to floods and in high-risk areas, and may be unable to afford appropriate levels of insurance.

Thus, many of these families are unable to rebuild post-disaster and struggle to recover. They may also lack the means and support networks to relocate, resulting in higher debt or even homelessness. The compounding effect of these challenges creates a poverty trap with lasting intergenerational impacts.

Such impacts may be further amplified for vulnerable groups in Aotearoa – including Māori, recent migrants and ethnic minorities, the elderly, and people with disabilities. A recent DIA report identifies at least 75 communities across Aotearoa with high levels of socioeconomic vulnerability and exposure to risk of flood, with 44 of these being particularly 'vulnerable' in terms of not having flood protection infrastructure nor financial capacity to fund flood responses.

Finally, there are also environmental impacts of flooding. For example, as a result of the July 2021 floods in Westport more than 2,100 tonnes of flood-affected building and domestic waste was sent to landfills. This creates a further unquantified financial and environmental cost.

In this way, the economic, environmental, social, and intergenerational wellbeing impacts of flooding are felt long after the floods recede. More often than not, these impacts of climate change-induced weather events are disproportionately borne by low-income and vulnerable groups. Importantly, it is not just these natural disasters, but also how governments mitigate and respond to them, that contributes to growing inequality.

Sources: Stuff.co.nz. (15 July 2022). ***More than 400 homes still not repaired one year on from Westport floods.*** Retrieved from https://www.stuff.co.nz/the-press/news/west-coast/300636197/more-than-400-homes-still-not-repaired-one-year-on-from-westport-floods; DIA. (2020). ***Vulnerable communities exposed to flood hazard*** report.

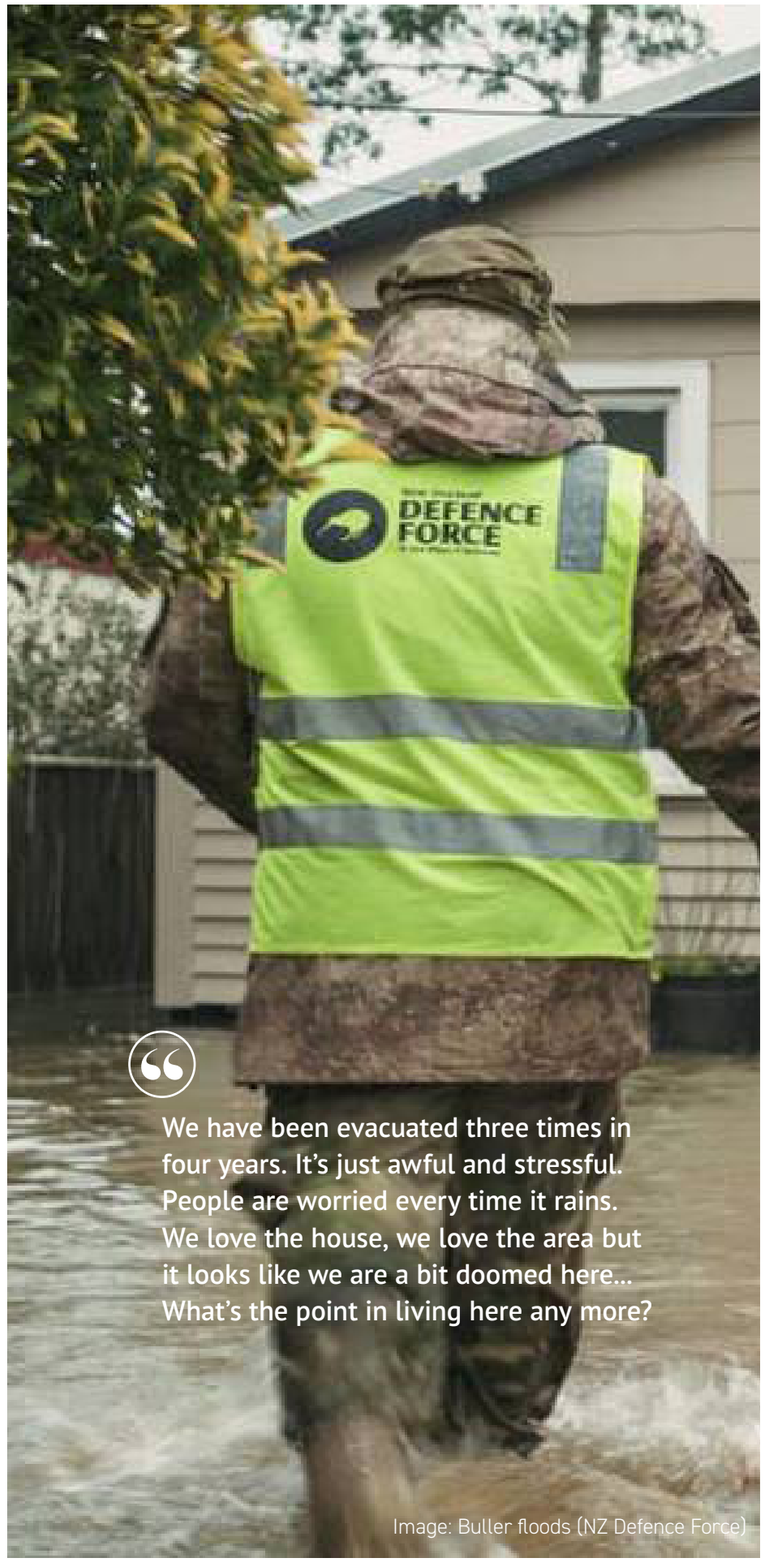


Image: Buller floods (NZ Defence Force)

There are strategic risks in our current approach

The business as usual approach to flood protection is creating significant strategic risk for the Crown.

Climate change will increase our flood risk of flood events, and if left unmitigated this will lead to partial or full insurance retreat.

Climate change increases flood risk and insurance retreat

Climate change has been identified as a threat to the re/insurance industry as early as 1979. The issue impacts insurance markets in two ways.

First, extreme weather events are increasing our underlying flood risk meaning insurance companies are also increasingly taking on a greater risk, along with potentially bigger financial losses. This requires a greater reliance on reinsurance to remain solvent.

Second, it means that flooding is no longer an unforeseeable or chance event, but is becoming an increasing reality for many regions. Indeed, the Insurance Council of New Zealand (ICNZ) notes that certain impacts of climate change such as sea level rise are neither unforeseen nor insurable.

As a result, insurers are more attuned to climate change in their actuarial analysis and pricing. Using sophisticated catastrophe and disaster modelling tools, insurers are now shifting toward risk-based pricing where individual flood risk ratings determine premiums.

In some cases, the level of flood risk may be too high or unprofitable for re/insurers to underwrite, making insurance unaffordable and/or restricted in certain regions (partial retreat) or creating 'no go' zones where insurance companies fully retreat from providing coverage.

Previous evidence suggests partial insurance retreat occurs when flood probabilities exceed the 2% Annual Exceedance Probability (AEP) threshold, and full retreat by 5%. In fact, we are already seeing insurance retreat play out in flood-prone areas such as Florida and Louisiana, in the United States.

The state of play in Aotearoa

According to a 2018 Lloyd's of London report, New Zealand is the second riskiest country, after Bangladesh, in terms of expected losses from natural disasters (as a proportion of GDP). We also have one of the highest levels of insurance penetration in the world - between 96 to 98% of homes being insured - with flood risk cross-subsidised over a wide base.

However, in late 2021 Tower Insurance shifted toward an individual risk based system for flood protection with approximately 10% of its customer base seeing an increase in premiums. Based on early indications we can expect the local insurance market to follow suit, especially since most insurance companies in Aotearoa are internationally based.

Other companies such as IAG have also signalled the impending impact of climate change on risk, while calling for urgent collaborative flood risk prevention and reduction.

These changes are likely to have implications for insurance availability and affordability, and central government is already considering options for home flood insurance as outlined in the National Adaptation Plan.

The ICNZ has also set out its views on the need for an urgent, proactive, and coordinated approach to flood risk mitigation and adaptation in Aotearoa. They have emphasised that the time for acting is now, while insurance is still largely accessible across the country, rather than relying on affordability issues as the trigger for action.

More recently IAG has echoed these sentiments and put forward a three-step plan for flood risk reduction, including:

(1) improved mapping of flood prone locations;

(2) implementing national policy to stop development in flood prone locations; and

(3) developing a business case for a national programme of investment in flood protection based on priority locations identified in step 1.

Thus, there is growing impetus from the insurance industry for more proactive risk reduction and adaptation in the lead up to its eventual shift toward risk-based pricing, alongside consistent signalling that the industry is committed to being part of the solution.

Sources: Bajrektarevic, A., & Baumer, C. (2012). *Climate change and reinsurance: The human security issue.* Economics, Management & Financial Markets, 7(4), 42-86; Surminski, S. (2017). *Fit for the future? The reform of flood insurance in Ireland: resolving the data controversy and supporting climate change adaptation.* Policy paper, The Grantham Research Institute on Climate Change and the Environment; Storey, B., Owen, S., Noy, I. & Zammit, C. (2020). *Insurance Retreat: Sea level rise and the withdrawal of residential insurance in Aotearoa New Zealand.* Report for the Deep South National Science Challenge, December 2020; Llyod's of London. (2018). *A world at risk: Closing the insurance gap.*; Ministry for the Environment. 2022. *Aotearoa New Zealand's first national adaptation plan.* Wellington.; ICNZ. (2022). *ICNZ submission on the draft National Adaptation Plan including managed retreat.* Retrieved www.icnz.org.nz.

Our co-investment approach

Significant national interest in flood protection requires ongoing co-investment.

Our co-investment proposal will enable essential infrastructure work to progress in some of our most vulnerable communities.

In 2021, Kānoa invested $217 million into 55 flood protection projects across Aotearoa as part of the government's COVID-19 recovery programme. This investment represents the most significant contribution from central government in over 30 years and has fast-tracked projects to improve long-term community flood resilience.

Regional councils prioritised 'shovel ready' projects that would accelerate existing or planned programmes of work for flood risk management. Kānoa and central government priorities for these projects were around climate resilience, with social procurement as an implementation requirement.

This programme was considered the first step in an establishing an effective ongoing co-investment partnership for flood resilience between central and local government.

The progress to date evidences councils' capability and track record of delivery on projects funded through central government contributions. These projects have also delivered social, economic, cultural, and environmental benefits.

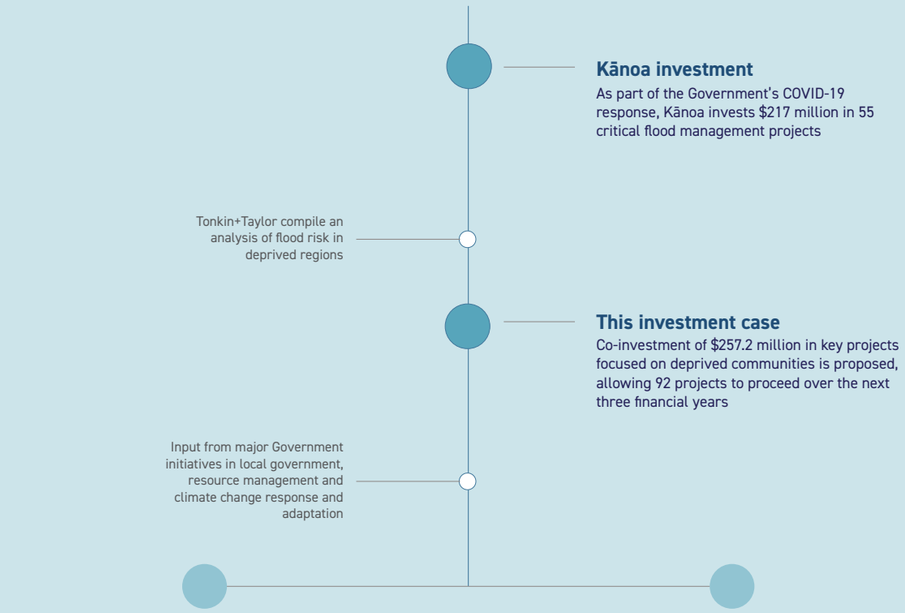
The sector's delivery and execution of these 55 essential flood protection projects provides an important foundation for co-investment and developing genuine partnership with central government in improving community flood resilience and wellbeing outcomes.

Within this context, our request for co-investment of $257.2 million over three years represents the continuation of essential infrastructure work, allowing some of our most vulnerable communities to progress shovel-ready flood protection projects.

Central government has and continues to demonstrate a significant interest in improving our flood resilience in the face of climate change; as seen in the 2020 Cabinet Paper, the National Adaptation Plan 2022-2028, and the Resource Management Act reforms. This interest is also increasingly reflected in our communities' needs and expectations.

Sources: Cabinet paper. (2020). *Improving resilience to flood risk and supporting the COVID-19 recovery;* Ministry for the Environment. 2022. *Aotearoa New Zealand's first national adaptation plan.* Wellington.; ICNZ. (2022). *ICNZ submission on the draft National Adaptation Plan including managed retreat.* Retrieved www.icnz.org.nz.

Two additional elements are required to ensure Aotearoa has a robust approach to flood protection that will respond effectively to the challenges of climate change. These are a sustainable co-investment model that brings together central and regional government, and a national PARA assessment model that enables informed decisions to be made about protection, mitigation and retreat on a community-by-community basis across Aotearoa.

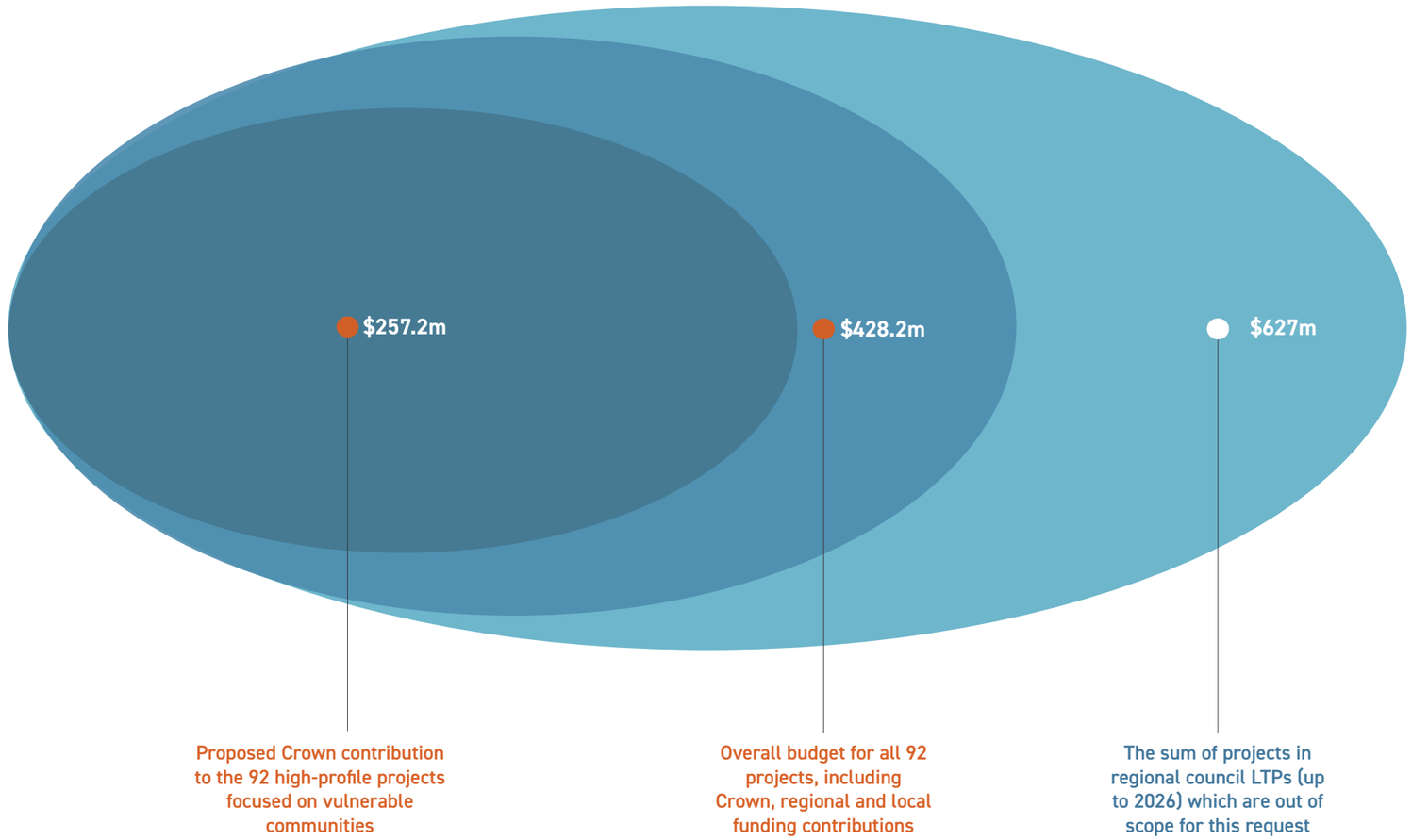


The co-investment summary

Our suggested co-investment allocation rate is 75%/60%, based on deprivation (at the territorial authority level) and ability to fund flood protection measures from the regional ratepayer base, as detailed overleaf.

The $428.2m of capital investment is therefore shared 60% central government and 40% regional councils. As the figure at right shows, the central government investment is $257.2m (with regional council investment being $171m). This is a capex investment.

The following pages provide an overview of the investment summary, proposed flood protection projects, projected cashflow, and delivery roadmap for this package of projects.



Project investment summary

A deprivation-based approach has been used to allocate national funding, using a 75/60 model.

Following the recent steer by DIA as well as the focus on deprived communities in the 2020 Cabinet Paper, we have used deprivation as both a prioritisation tool for the most vulnerable region, as well as a suggested mechanism for apportioning cost share across projects.

The methodology is based on a region - here, we refer to the Territorial Authority (TA) level - being allocated a co-investment contribution based on ability to fund the flood protection measures from the regional ratepayer base.

Specifically, we use the 2018 Index of Multiple Deprivation (IMD) as an indicator of deprivation at the TA level. The IMD18 comprises 29 indicators grouped into seven domains of deprivation: Employment, Income, Crime, Housing, Health, Education and Access to services. Data zones (TAs) are then ranked into deprivation quintiles, as indicated by the heat map colouring in the table at right.

This table summarises the funding breakdown across projects and shows what the allocation of investment between central government and regional councils might look like with such an approach. Thus, majority of regions are allocated a co-investment contribution of 60%, with the most deprived territorial authority - Ōpōtiki District - getting a higher rate of 75%.

As indicated on the previous page, the overall central government investment is $257.2m and the regional council investment is $171m.

Source: ***Index of Multiple Deprivation***. Retrieved https://imdmap.auckland.ac.nz/

Territorial Authority (TA)	IMD (Total)	Level of assistance	Total Project Cost	Crown	Regional
Ōpōtiki District	5321	75%	$1.84	$1.38	$0.46
Far North District (2)	4801	60%	$0.91	$0.55	$0.36
Horowhenua District	4627	60%	$12.70	$7.62	$5.08
Hauraki District (6)	4622	60%	$16.98	$10.19	$6.79
Gisborne District (3)	4480	60%	$17.60	$10.56	$7.04
Whanganui District	4383	60%	$13.20	$7.92	$5.28
Whakatane District (2)	4322	60%	$22.40	$13.44	$8.96
Waitomo District	4219	60%	$5.00	$3.00	$2.00
Kaipara District (2)	3998	60%	$17.00	$10.20	$6.80
Masterton District (6)	3939	60%	$13.19	$7.91	$5.28
Grey District	3896	60%	$4.00	$2.40	$1.60
Waikato District (6)	3725	60%	$18.44	$11.06	$7.38
Thames-Coromandel District	3593	60%	$2.80	$1.68	$1.12
Hastings District (2)	3535	60%	$34.00	$20.40	$13.60
Palmerston North City (2)	3519	60%	$6.50	$3.90	$2.60
Invercargill City	3395	60%	$11.00	$6.60	$4.40
Napier City	3390	60%	$2.00	$1.20	$0.80
Taupo District	3248	60%	$3.40	$2.04	$1.36
Upper Hutt City (3)	3200	60%	$19.66	$11.80	$7.86
Kapiti Coast District	3095	60%	$14.70	$8.82	$5.88
Gore District	3044	60%	$18.00	$10.80	$7.20
Westland District (3)	3032	60%	$19.00	$11.40	$7.60
Western Bay of Plenty	2933	60%	$13.00	$7.80	$5.20
Nelson City (6)	2911	60%	$27.00	$16.20	$10.80
Christchurch City	2831	60%	$1.50	$0.90	$0.60
Clutha District (3)	2813	60%	$6.50	$3.90	$2.60
Dunedin City (10)	2791	60%	$27.80	$16.68	$11.12
Carterton District	2728	60%	$2.68	$1.61	$1.07
Timaru District (3)	2641	60%	$7.50	$4.50	$3.00
South Wairarapa District (5)	2565	60%	$12.60	$7.56	$5.04
Tasman District (2)	2517	60%	$11.40	$6.84	$4.56
Marlborough District (4)	2449	60%	$13.80	$8.28	$5.52
Ashburton District	2314	60%	$20.00	$12.00	$8.00
Waimakariri District (2)	2204	60%	$6.50	$3.90	$2.60
Southland District (4)	1879	60%	$2.10	$1.26	$0.84
Central Otago District	1217	60%	$1.50	$0.90	$0.60
Total investment			**$428.20**	**$257.20**	**$171.00**

Project locations: North Island

Profile

Total number of projects = 49
Total investment = $250.6m

Territorial authority by deprivation quintile

Ōpōtiki District	5321
Far North District	4801
Horowhenua District	4627
Hauraki District	4622
Gisborne District	4480
Whanganui District	4383
Whakatāne District	4322
Waitomo District	4219
Kaipara District	3998
Masterton District	3939
Waikato District	3725
Thames-Coromandel District	3593
Hastings District	3535
Palmerston North City	3519
Napier City	3390
Taupō District	3248
Upper Hutt City	3200
Kāpiti Coast District	3095
Western Bay of Plenty	2933
Carterton District	2728
South Wairarapa District	2565

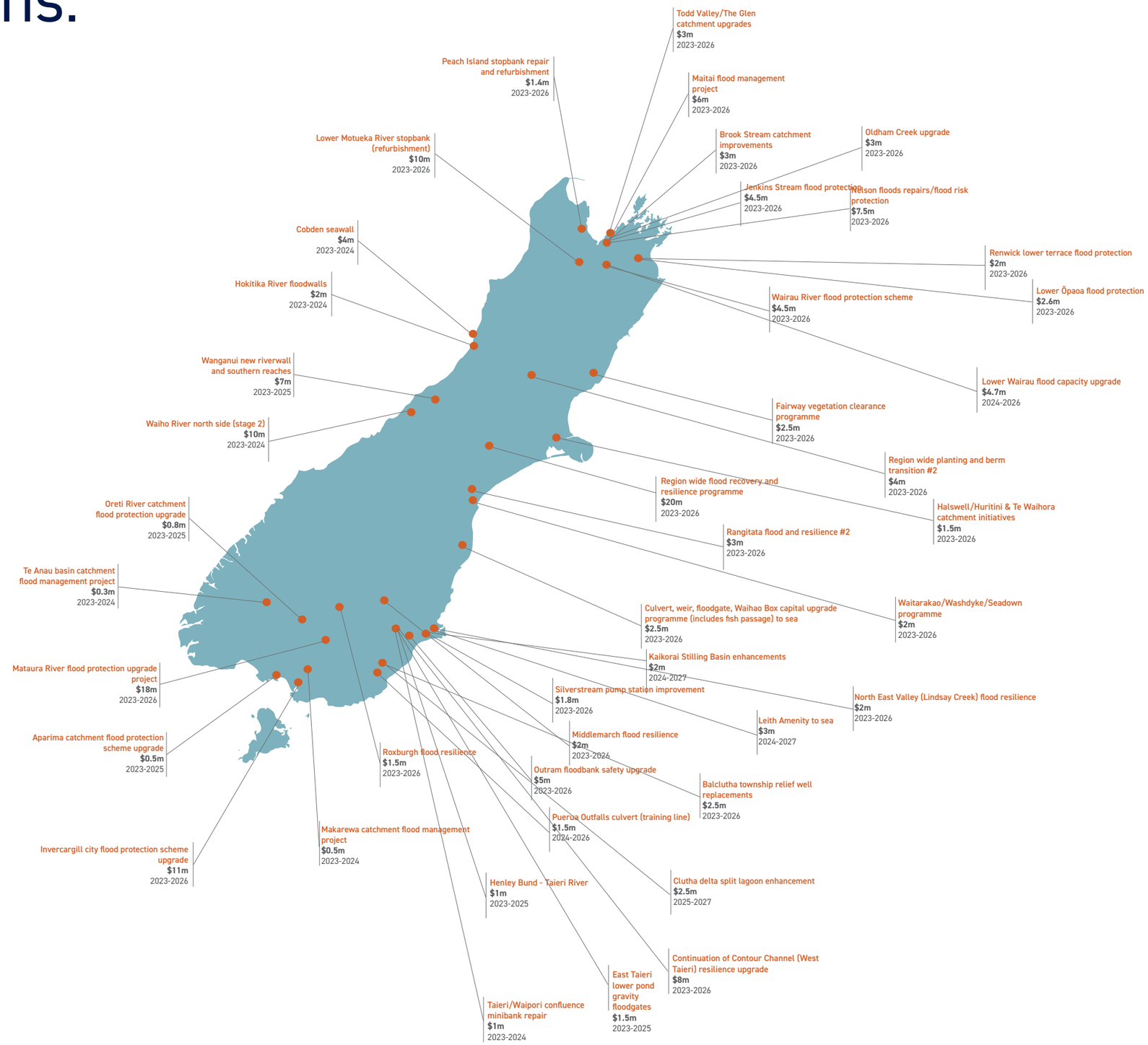
Project locations: South Island

Profile

Total number of projects = 43
Total investment = $177.6m

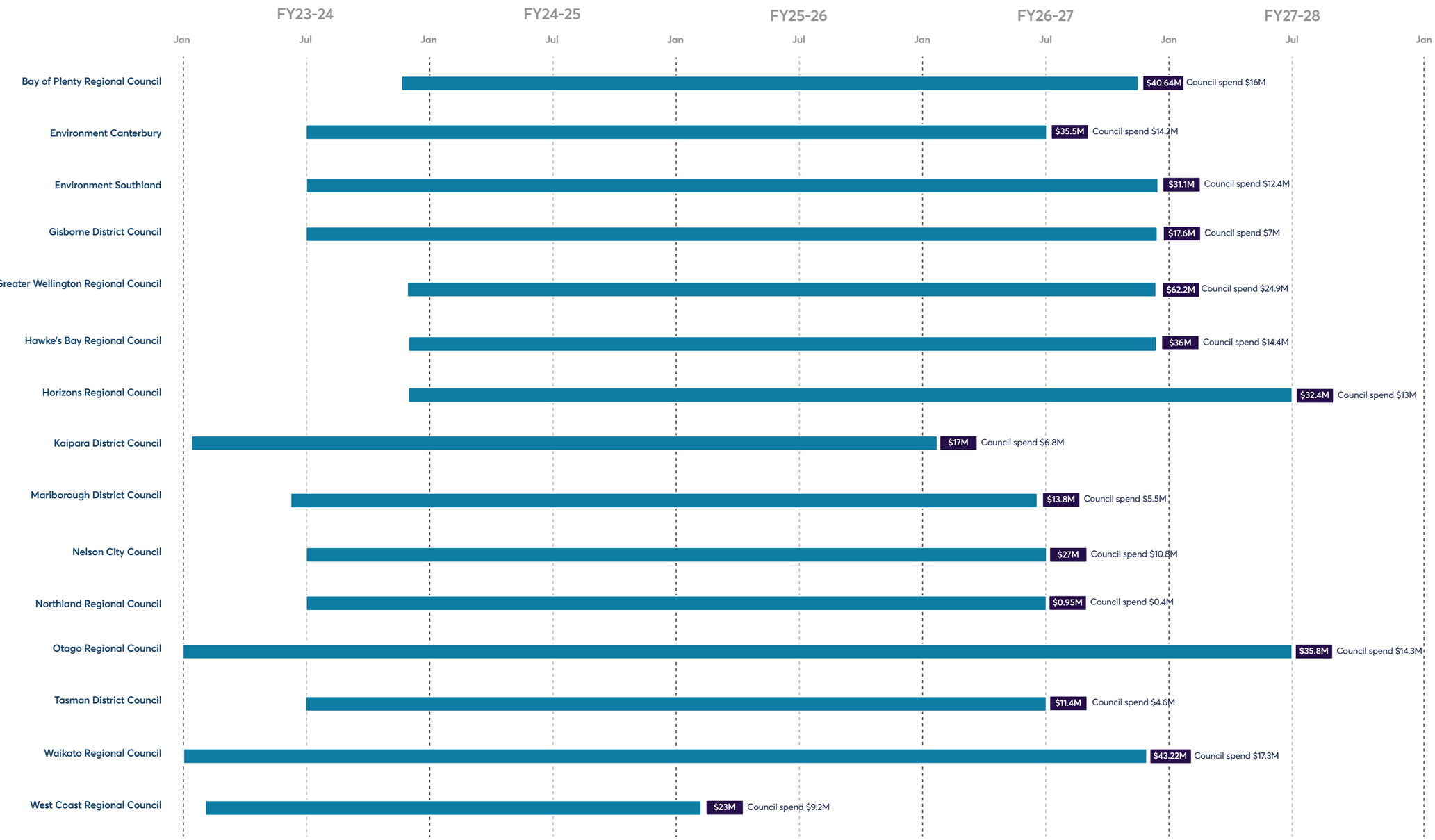
Territorial authority by deprivation quintile

Grey District	3896
Invercargill City	3395
Gore District	3044
Westland District	3032
Nelson City	2911
Christchurch City	2831
Clutha District	2813
Dunedin City	2791
Timaru District	2641
Tasman District	2517
Marlborough District	2449
Ashburton District	2314
Waimakariri District	2204
Southland District	1879
Central Otago District	1217



The delivery roadmap

Consolidated overview of Regional Council spend



The options for longer term intervention

There are a range of options for central government intervention varying in terms of costs and risk profiles.

Investing in flood resilience through PARA represents the least risky and most cost-effective and equitable option forward.

The figure at right illustrates the range of central government intervention options in flood risk. These options range from preventative spending through to dealing with the consequences post-flooding.

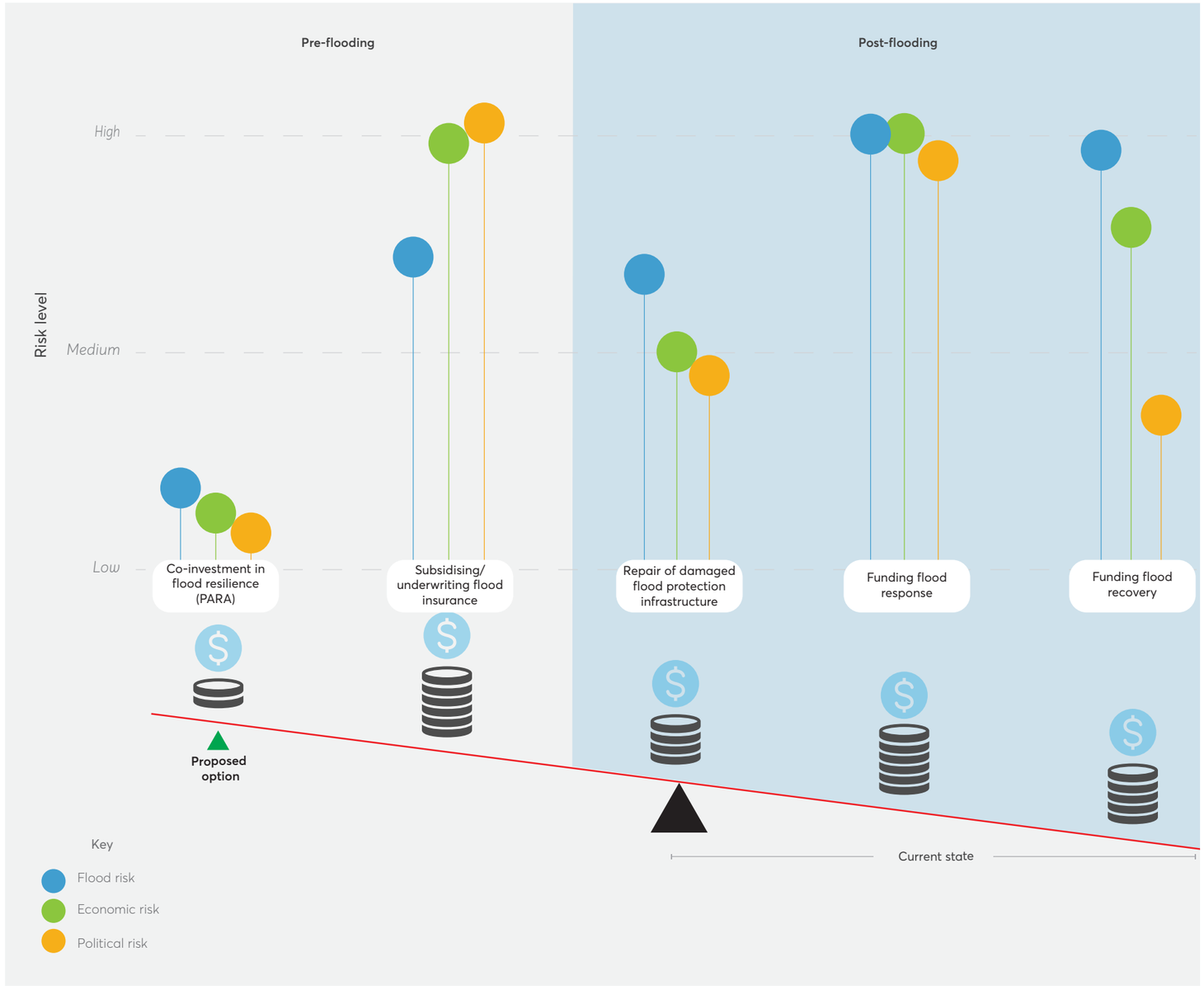
The risk profile for each option is depicted. This includes:

- Economic risks such as increased Crown liability or debt as well as increased future spending due to climate change impacts,
- Political risks such as incentivising risk-taking, creating unrealistic or impractical public expectations for intervention, and erosion of public trust and confidence, and
- The likelihood of spending reducing future flood risk.

The relative financial costs of each option is also indicated.

In weighing both risks and costs, it becomes evident that co-investment in flood resilience through the PARA framework is the most cost-effective option.

It is also the pathway that most equitably allows for sharing the costs of climate change across government, industry, and the public. This is our proposed option.



Developing a sustainable flood management co-investment model

Agreeing a new national approach will need input from national and regional government, as well as the perspectives of the insurance industry.

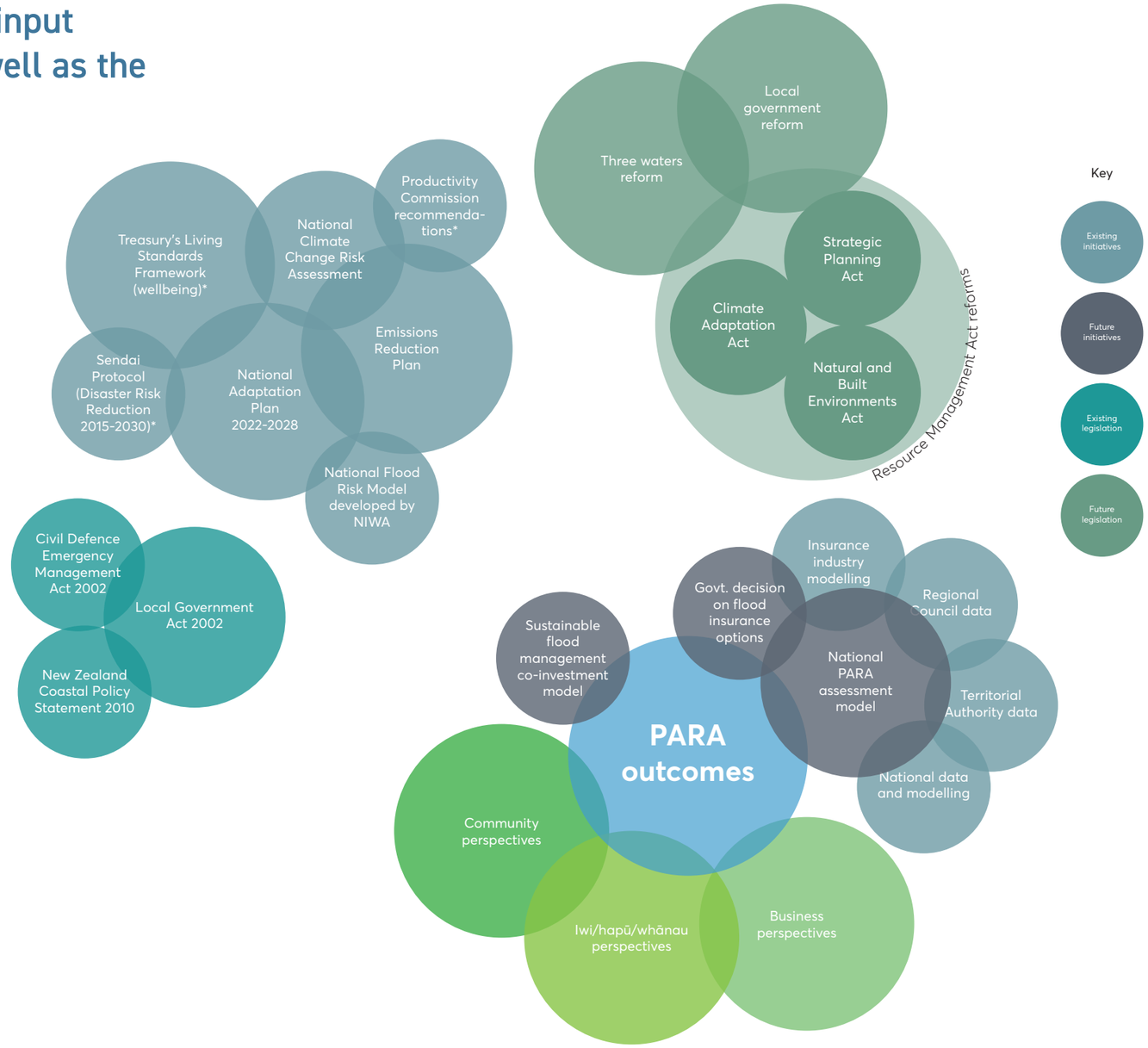
Getting beyond the current project-based approach requires the development of a sustainable model for co-investment. This model will require a range of inputs, as the diagram at right notes:

- The planned changes to the legislative and regulatory frameworks in a range of areas – from climate change to local government – will need to be taken into account as both enabling and constraining factors
- In particular, there is a need for legislation to consider flood protection projects within the context of climate change adaptation as a matter of national interest
- Existing legislation will likewise form part of the foundation for how and why governance, implementation and funding is apportioned between different agencies and tiers of government
- The perspectives of the community, iwi and the business sector need to be taken into account.

There are a number of matters that need to be addressed as part of the work, notably:

- The governance, authority and responsibility of the various entities and agencies responsible for national flood protection
- The intersection between flood protection and other PARA-related factors, such as planning controls in flood-prone areas
- The equitable share of funding between central regional and local government, and the participation of the insurance industry in helping develop solutions
- The processes and decision points used to make investment decisions about flood protection initiatives within the PARA framework.

Developing the co-investment model will require a range of agencies to be involved alongside Te Uru Kahika. The proposed work plan for how this will be achieved is shown on subsequent pages.



Developing a sustainable flood management co-investment model

Agreeing a new national approach will also require further work to determine an equitable long-term co-investment commitment.

Based on the current Regional Council funding in the current LTPs the total investment in the 10 year LTP horizon out to 2032 is $3.1B. In the 3 years out to 2026 the sum outside the scope of this co-funding request is $627m.

However, as experience across the country shows, even this level of self-funding and investment from communities is insufficient in the face of the evolving climate change challenges. A more sustainable co-investment model – reflecting a genuine partnership between central and local government – is required to address our future flood resilience needs.

Previous work by Te Uru Kahika has estimated the likely cost of this work at around $350 million pa. Regional councils have recently committed their investment at $200 million pa; an increase from the previous $175 million pa. This leaves an annual shortfall of $150 million - the suggested co-investment amount from central government long-term.

However, additional work is needed to confirm whether this amount will be sufficient. This work would clarify the:

- Preferred level of service for all 367 flood protection schemes in Aotearoa (at a level of 1:100 or better)
- Cost required to achieve expected service levels
- Prioritisation of projects across the country
- Cost share between central and regional councils, and how this is apportioned across different regions
- Intended benefits, including cost savings, from flood damage or harm averted
- How these investments relate to the different PARA measures; Te Mana o Te Wai considerations; as well as environmental and considerations
- Relationship between flood protection investment and Waka Kotahi and/or Kiwi Rail infrastructure improvement plans.

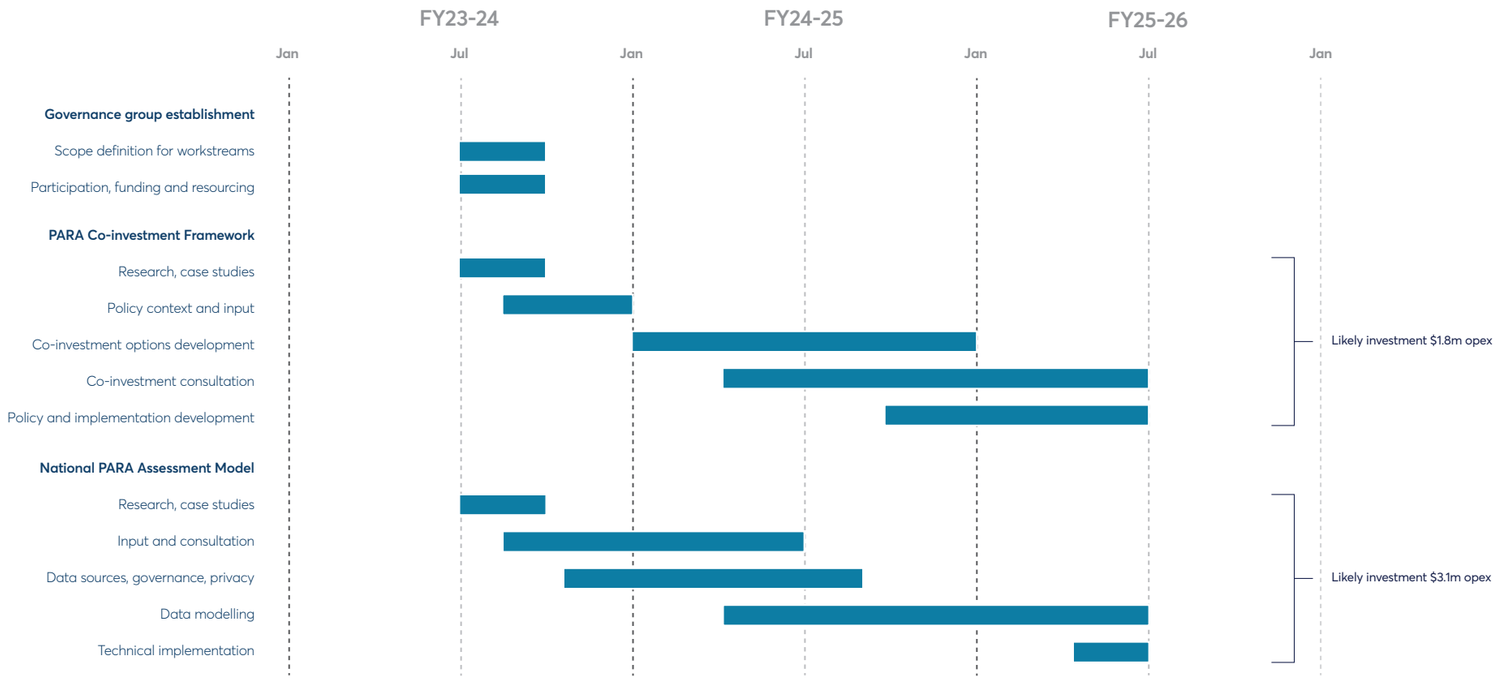
The likely investment for this work is indicated in the work plan on the next page. The primary outcome of this work will be to determine a long-term and equitable co-investment amount that can be agreed upon with central government – as a budgetary allocation for an agency such as DIA – toward improving our communities' resilience against flood risk and related climate change effects.

The equitable funding of essential flood protection infrastructure in a world increasingly challenged by climate change is an issue for many governments. After extensive flooding in 2007, the UK government reviewed its national strategy – and there are potential learnings for Aotearoa New Zealand in their findings and their path forwards.

The sustainable co-investment work plan

Work on both the policy aspects and the national model can commence in FY23/24.

Developing the correct PARA policy frameworks and supporting data model will require a separate project, with an agreed governance structure, participating councils and agencies, and input from iwi, the insurance sector and other key stakeholders. Initial opex funding for this work has been included within the bid for Budget 23, and an initial high-level project plan with resourcing estimates is shown below.



Coordinating across the sector

Given the nature and implications of flood protection, it is likely that a range of agencies will wish to contribute to the development of the sustainable co-investment approach, and may wish to either provide data to or receive information from the national PARA assessment model. In addition, a range of interested parties will also wish to participate in both the policy development and the data modelling, including iwi and the insurance industry.

And in order for the theory of PARA to be translated into effective policy, operational initiatives and on-the-ground activities, it will be necessary for the work to be anchored in the reality of what can be achieved for and with communities across Aotearoa. For this reason, it is proposed that Te Uru Kahika act as the coordinating body for the policy work and the data modelling, using a shared governance model with appropriate central government agencies.

Undertaking this work will require resourcing and funding on behalf of Te Uru Kahika and agencies. The budgets at left represent the commitments of time and resource over the next three years required to achieve the policy outcomes and data model, over and above existing baselines. In practice, it is anticipated that some existing baseline resource will also be contributed from regional councils and participating agencies.

It is proposed that these further areas of work are developed into a separate business case, under the auspices of the proposed governance entity, in order to define the scope and outcomes expected and confirm the resourcing and budget for the activity.

Recommendations

It is recommended that government proceed with co-investment as a matter of national interest.

As evidenced throughout business case, considerable work has been done over the last few years to assess and quantify the risks across our current flood protection schemes, as well as the investment approaches needed to address these.

In particular, we have highlighted the inequities in the current funding approach and its inability to remain a sustainable funding model in the long-term. We have also demonstrated there is significant national interest in flood protection and resilience - in terms of its wellbeing and fiscal impacts, as well as through the protection of vital Crown assets and infrastructure.

The current proposal builds on the analysis and co-investment pathways already established between central government and Te Uru Kahika. It sets out an immediate prioritisation of flood protection works, along with a pragmatic roadmap for flood resilience over the next few decades.

We therefore recommend that central government:

1. Approve the $257.2 million request for co-investment in a three-year delivery programme for 92 additional flood protection projects, and

2. Sustain the existing governance arrangements (Advisory Board) under the Resilient River Communities banner for the proposed tranche of projects

The indicative co-investment rates and amount are consistent with what has been funded through the previous Kānoa Covid Recovery Programme, albeit with local government contributing at a higher rate. However, the continuation of shovel-ready funding is unsustainable for developing our flood resilience long-term.

In order to develop a comprehensive national model of flood resilience, we recommend that central government:

3. Work with Te Uru Kahika to invest in and implement a longer-term programme of work including developing a sustainable co-investment model and a national PARA (multi-tool) assessment model

4. Re-convene the Community Resilience Steering Group to provide leadership and a consolidated steer on future community flood resilience recommendations.

Te Uru Kahika Regional and Unitary Councils Aotearoa

RIVER FLOOD RISK RESILIENCE – LEARNINGS FROM CYCLONE GABRIELLE

Memorandum to: Robert Pigou, Deputy Chief Executive and Head of Kānoa, MBIE
Memorandum from: Michael McCartney, Convenor, Te Uru Kahika

Version Date: 3 March 2023

EXECUTIVE SUMMARY

- Cyclone Gabrielle has been a **wake-up call** for everyone.
- A **step change** is required to investment in river-related community flood-risk resilience-improving infrastructure.
- The **authorising environment and social licence** to make this step change has never been stronger.
- The shared goal should be to make New Zealand's river-related flood risk management infrastructure '**fit for purpose' within a decade**.
- A decision by Government to co-invest $257m in Budget 2023 (as described in the 'Before the Deluge' report) would enable **92 projects to be completed within three years (**an average of $85.5m pa). Regional authorities will contribute over $170m toward these projects.
- On-going capacity and capability enhancements, to enable the effective and efficient delivery of current and proposed works, require establishment of **a longer-term pipeline** of resilience enhancing projects.
- Following the devastation of Gabrielle, additional Government investment – over and above that described in the 'Before the Deluge' report should therefore be made, as detailed in the table below. **Government co-investment should be around $200m pa for the next three years and then be $250M** pa by FY 2026/27.
- A dedicated fund to support a pipeline of works for a decade would result in savings and more **effective, efficient, and timely actions** to substantially reduce flood risk at most vulnerable locations.
- The benefits of doing this are significant. Capacity and capability would be built and retained right through the chain of provision. Inter-regional cooperation and procurement savings would be optimised. Consenting and community involvement activities would be more strategically approached and basically **more would be done consistently better.**
- **Regional authorities have already committed investment of $200m** pa toward flood-risk resilience improving infrastructure. They will work with their communities to ramp up their co-investment share over the next ten years.
- The list of matters of **national interest** that will be served by a return of Government to the co-investment table is overwhelming.
- **Lives and livelihoods** will continue to be at significant risk as has been evidenced by Gabrielle unless additional investment is made.
- Investment in river-related flood-risk infrastructure is a pre-requisite to investment in enhancing the security of other network utility infrastructure services ('investment in **river management infrastructure to achieve improved infrastructure resilience'**) and to give business the confidence to reinvest.
- **Proven governance and delivery systems** exist within regional authorities. Building trust, confidence and securing respect from central government for the functional leadership and competence of regional authorities is critical.

- The current '**Climate Resilience Flood Protection Programme Advisory Board**,' is capable of refinement to protect Government's co-investment interests in an expanded ten-year programme.
- Spatial planning and managed retreat tools are important parts of a necessary **multi-tool approach** to the management of flood risks. The tool in the toolbox with **most immediate, practical, affordable, and visible beneficial effects,** is to enhance investment in river-focused flood risk resilience-improving infrastructure.

In brief: **confirmed, substantial and immediate co-investment in a long-term pipeline of river flood-risk resilience-improving infrastructure is the priority means of restoring the 'flood-damaged' confidence of New Zealanders.**

Table one: Government co-investment

FY 2023/24	FY 2024 / 25	FY 2025 / 26	FY 2025 / 27	FY 2027 / 28	FY 2028 +
Co-investment for 92 projects described in 'Before the Deluge'					
$93m	$88m	$70m	$6m		
Additional co-investment request - post Cyclone Gabrielle					
$100m	$100m	$150m	$200m	$250m	$250m
TOTAL					
$193	**$188**	**$221**	**$206**	**$250**	**$250m**

BACKGROUND

Partnership between Kānoa and Te Uru Kahika

Thank you for the on-going support you and Kānoa have provided for the flood risk resilience-improvement efforts of Regional Authorities / Te Uru Kahika and their River Management Special Interest Group (SIG). Thanks too for your sponsorship and advocacy for the sector's interest in seeking Government co-investment in the 92 projects described in the sector's December 2022 report 'Before the Deluge'.

Fresh look at the requests contained in the 'Before the Deluge' report

Cyclone Gabrielle has been a wake-up call for everyone. LGNZ's Regional Sector Group (RSG) were on task when considering this on 17 February 2023. As part of their discussion, they requested Te Uru Kahika to take a fresh look at the 'Before the Deluge' report. Te Uru Kahika now seek an urgent meeting with you to talk about what more could be done to make more progress, more quickly, to add necessary flood risk resilience to flood-risk communities.

Goal

Te Uru Kahika's goal is to have New Zealand's river-related flood risk resilience-improving infrastructure fit to meet agreed levels of service within a decade. The sector would like to work closely with Kānoa to achieve this goal.

Focus of this memorandum

The focus of this memorandum is on flooding from rivers.[1] It is this flooding that poses the biggest risk to life. It is here that the national interest and the need for Government co-investment is most immediately apparent - as tragically exposed on the Heretaunga Plains and elsewhere during recent events.

Floods from rivers are New Zealand's major natural hazard. The risk of damage from these events is exponentially ramping-up because of climate change. Improving community resilience against the risks posed by the exceedance of river channel capacity, by adapting and improving river flood management infrastructure, is viewed by Te Uru Kahika as the matter Government should be giving priority attention to as it undertakes its post-Gabrielle analysis.

Structure and purpose of memorandum

With the effects of Cyclone Gabrielle in mind, the purpose of this memorandum is to provide information to support a request for increased co-investment (over and above that in the 'Before

[1] Flooding is caused by the exceedance of the channel capacity of either natural or infrastructural fluvial / river or pluvial systems or by coastal inundation.

the Deluge' report) and making necessary refinements to the institutional arrangements to achieve the sector's desired river flood risk resilience-improving infrastructure goal**.**

The memorandum is in two parts. The first part summarises Te Uru Kahika's refreshed investment proposal, and the rationale for putting it forward. The second part (attached as an appendix) provides additional information about the mechanisms needed to support and deliver these investment proposals.

What Te Uru Kahika seek from Kānoa (and the Government) is:

- A commitment to a longer-term pipeline and a higher-level of certainty about Budgetary provision for co-investment for agreed river-focused community flood risk resilience-improving infrastructure projects. (NB what is requested is approximately $200m per annum in Budgets 2023-25 and $250m in the out-years beyond that).
- A fresh look at the short-term project priorities as put forward by Te Uru Kahika in the 'Before the Deluge' report.
- An acceleration of the 'investigative' works needed to get projects, such as those at Tolaga Bay and Wairoa, over-the-line by providing an immediate commitment to $50m in Budget 2023.

REFRESHED INVESTMENT PROPOSITION

Flooding effects of Gabrielle and other recent cyclones

Cyclone Gabrielle has had a catastrophic impact on many sites located across 30% of New Zealand's land mass. This land mass contains 50% of the nation's population and 50% of the nation's earning capacity. Much of this is in the north-eastern part of the North Island.

As of 25 February, 11 people died, 10,000 people were displaced and 10,000 insurance claims have been lodged with IAG. Minister of Finance Hon Grant Robertson has estimated that the cost of recovery from the damage caused by Cyclone Gabrielle will exceed $13b.

The double whammy of Cyclone Gabrielle was that it compounded the effects of Cyclone Hale on Northland and Auckland and doubled-down on the all-too-regular flooding affecting Coromandel.

At other locations, and equally challenging, were the August 2022 floods impacting Nelson, Marlborough and Canterbury, and earlier flooding in Southland. On top of that, Westport is still reeling from their July 2021 floods with many residents still lying awake at night worrying about the next flood.

One in seven of New Zealand's residents live in areas that may be affected by floods. The assets exposed to flooding in Aotearoa have a value of $135b. These residents and these assets are fundamental to the effective functioning of the economy and the cohesiveness / comfort of communities.

Longer-term co-investment proposal

The impact and flooding caused by climate change - particularly that resulting from the associated increase in the frequency of subtropical storms, implies that securing a permanent river flood risk resilience-improving infrastructure budget line item, within Budget 2023 and within future Budgets, is critical.

A step change to New Zealand's approach to the scale and speed of the provision of flood risk resilience-improving infrastructure is required. Gabrielle dramatically changed the authorising environment for both Government and Local Government decision-making about river flood management infrastructure. The public's support of Government and regional authorities for expanded investment is unlikely to be challenged.

Commitment to a regular budgetary 'line item' will enable an on-going pipeline of river flood risk resilience-improving infrastructure works to be rolled-out over the next decade thereby enabling the sector to move past short-term and somewhat ad-hoc funding solutions. The focus will move to the long game.

Regional authorities have already committed $200m pa for investment in flood-risk resilience improving infrastructure. They have stated they will work with their communities to ramp up their co-investment share over the next ten years.

Te Uru Kahika's earlier reports (2018, 2019 and 2022)[2] provided the case for Government co-investing $150m per annum. Since those reports were prepared, inflation, the expanded awareness of the effects of climate change and increases to the cost of construction suggest Te Uru Kahika's earlier requests were undernourished by 30%, and possibly more. Nor did these requests take full account of the effects of climate change.

Te Uru Kahika would therefore like Government to co-invest approximately $200m per annum in FY 2023-25 and then $250m per year in subsequent 'out years'. With comparative ease, Te Uru Kahika is confident it could provide Kānoa with a list of additional priority projects for co-funding over the next three years. This is a matter requiring Government's highest priority attention.

Confirming the priority of the 92 projects listed in 'Before the Deluge' – rapid reassessment

The 92 projects included in the current 'Before the Deluge' report are all 'ready-to-go' and they are all capable of being completed within just over three years.

These projects were identified and prioritised without the benefit of the devasting effects of Gabrielle and Hale foremost in mind. In the light of the learnings from these cyclones, Te Uru

[2] 'Hiding in Plain Sight' 2018; 'Central Government Co-investment in River Management for Flood Protection', July 2019; Central Government Co-investment in River Management for Flood Protection - Supplementary Report', January 2022.

Kahika would welcome the opportunity to work with the Kānao 'Climate Resilience River Communities Governance Board' to undertake a rapid re-assessment of these projects. The purpose of this re-assessment would be to reconfirm the relative priority and scale of assistance to be provided to these projects.

Accelerated investigation of 'near ready' projects

If the Wairoa River flood and Tolaga Bay flood scheme investigations had been more advanced, then works to improve the flood resilience of these communities would have been included, alongside the other 92 flood risk resilience-improvement proposals described in the 'Before the Deluge' report. This did not occur because both communities have limited local rating bases, thereby constraining the funding required to accelerate the completion of necessary investigative flood risk resilience-improving infrastructure plans.

Te Uru Kahika is also aware that, for the want of immediate additional funding, the proposed Heretaunga Plains flood risk resilience-improvement works – as described in the 'Before the Deluge' report, may have saved parts of Waipawa and several other Hawke's Bay communities from the ravages of Gabrielle's devastation.

Te Uru Kahika seek your consideration of the importance of co-investing in selected and urgent 'investigative, design and approval' initiatives to achieve the more rapid deployment of additional river flood risk resilience-improving infrastructure works.

Te Uru Kahika recommend Government commit co-investment of $50m toward this work in FY 2023 and that this work be undertaken as soon as possible. This would thereby assist to enable further priority projects to be made ready for roll-out in 2024.[3]

Amended total sum requested from Government

FY 2023/24	FY 2024 / 25	FY 2025 / 26	FY 2025 / 27	FY 2027 / 28	FY 2028 +
Co-investment for 92 projects described in 'Before the Deluge'					
$93m	$88m	$70m	$6m		
Additional co-investment request - post Cyclone Gabrielle					
$100m	$100m	$150m	$200m	$250m	$250m
TOTAL					
$193	**$188**	**$221**	**$206**	**$250**	**$250m**

[3] Local authority insurance and NEMA assistance will allow the damage done by Cyclone Gabrielle to existing structures to be fixed on a like-for-like basis.

INVESTMENT BENEFITS / RATIONALE

Cost / benefit of further co-investment in flood risk resilience infrastructure

Higher levels of co-investment in flood resilience-improving infrastructure would unquestionable have reduced the size of the impost of recent cyclones. Te Uru Kahika knows for example, that if $10m had been invested prior to 2021, Westport may not have needed the investment of over $100m to recover from the July 2021 event.

A secure pipeline of committed future work will enable flooding effects and their associated costs to be managed downwards. A secure pipeline will enable capacity and capability to be built, long term authorisations to be secured, agency relationships to be enriched, a strategic approach to be fully developed and applied and the community confidence would be placed on a sustainable footing. The key to these efficacy gains is to make decisions that move far beyond the stop-start experiences of the past.

In general terms, the sector's experience suggests the return on investment in flood resilience infrastructure is in the range of 1:6 to 1:8. These cost-benefit ratios are seldom matched within any other area of public sector expenditure.

Proven effectiveness of current river flood risk resilience-improving infrastructure

In many locations, existing flood risk resilience-improving structures stood-up well to Gabrielle. Communities were saved from potentially greater catastrophe because of these previous investments.

The recent Kānoa co-investment in the strengthening of the Taradale stop-bank helped to protect the Taradale community and much of Napier from flooding.

Similarly, the upgraded city-side works constructed as part of the Gisborne / Waipapoa River flood control upgrade, stood-up well to the test thrown at it by Gabrielle and largely saved Gisborne City from being flooded.

In addition, the upgrade of the Awanui scheme in Kaitaia saved upwards of $50m of potential damage that otherwise may have been caused by the 1:100-year storm event that occurred on 18 August 2022.

All these examples further confirm the cost benefit of investment in flood risk resilience-improving infrastructure.

Collateral benefits

A confirmed long-term pipeline of co-investment in river flood risk resilience improving infrastructure is critical to the task of restoring the damaged confidence of the communities and the economies of many parts of New Zealand.

Investment in river flood risk resilience-improving infrastructure is a pre-requisite to decisions about investment in the security of most other utility network infrastructure services. Flood protection infrastructure protects infrastructure.

Te Uru Kahika support the need for a full tool-box of ready-to-go solutions, however for many established urban environments (compared to new urban areas), they argue that the 'right tools' for the management of river flood risks may not be spatial planning or managed retreat. This is because the political challenges associated with putting these tools in place are formidable. In addition, the cost of implementation will be extraordinarily large. By comparison, flood protection structures are a highly visible and practical forms of comparatively immediate action.

This is not to say that 'managed retreat' has no short-term value. Some managed retreat is urgent. Current and obviously-beneficial managed retreat initiatives should be dealt with on a case-by-case basis. The necessary (but not yet approved) purchase of seven properties on Westport's Snodgrass Peninsula is an example of where this approach should be applied. Examples also exist in Hawke's Bay.

Stated more simply, Te Uru Kahika knows the most immediate intervention with most immediate beneficial effect is to improve flood risk resilience by providing more river management infrastructure. They believe there is no excuse for delaying progress on flood risk resilience-improving infrastructure decisions, that have 90% certainty, while endlessly thinking about the finer detail of policy affecting spatial planning and managed retreat. A multi-tool approach is required but perfect solutions under times of stress – such as those at present, are the enemy of good solutions.

Te Uru Kahika Regional and Unitary Councils Aotearoa

FLOOD RISK RESILIENCE INFRASTRUCTURE RECOMMENDATIONS FOR KĀNOA CONSIDERATION - POST CYCLONE GABRIELLE

1. Urgently meet with leaders of Te Uru Kahika to confirm Kānoa's commitment to seeking Government co-investment in river flood risk resilience-improving infrastructure of approximately $200m in FY 2023-2025 and $250m in subsequent out-years.

2. Work with Te Uru Kahika to undertake a rapid re-assessment of the 92 projects identified in the 'Before the Deluge' report to enable them to better reflect the learnings and priorities arising from Cyclones Gabrielle and Hale.

3. Co-invest $50m into the investigative work required to get selected flood risk resilience-improving projects, such as that at Wairoa and Tolaga Bay, to a point where necessary infrastructure can be quickly constructed.

APPENDIX ONE: ANCILLARY MATTERS

Alignment with network utility and other agencies

The continued functionality of many network utility services was severely compromised by the effects of Cyclone Gabrielle. These networks are in critical need of additional protection. The failure of Tairāwhiti / Gisborne and Hawke's Bay communication services and power transformers at some locations had a definitive and compounding effect on the stress levels being experienced by affected communities during Gabrielle. What's needed is an enhanced ability for flood risk mitigation infrastructure to underpin the security of other network infrastructure.

In addition, the lack of alignment of Te Uru Kahika flood resilience-improving infrastructure proposals in Southland, the West Coast, Hawkes Bay and likely in other locations - has in the past – (with likely continued effects in the future - unless amended), undermined the effectiveness of these proposals.

Institutional arrangements are required that bring all affected parties – including insurers, affected government departments and research agencies, to the table. Aligned decisions are required about the preferred priority and level of service of river flood risk resilience-improving infrastructure at all locations – particularly where allied infrastructure either compounds flooding risks or is itself at risk.

Respecting regional authority 'hands-on' community and flood risk responsibilities, knowledge, and relationships

Most Te Uru Kahika councils are in a solid space to effectively manage the planning and delivery of flood risk resilience-improving infrastructure. This has been enhanced by good, well-trialled and effective sharing and assistance across councils. The previous and on-going work of Te Uru Kahika's River Managers SIG has been a demonstrably valuable means of contributing to these gains.

Te Uru Kahika intend that in the future, collaborative arrangements will become more structured and will be further enhanced by formalisation of current inter-council arrangements.

Regional authorities are connected to their iwi, hapu, marae, communities, and regional economies. Te Uru Kahika urges Government to respect the functional leadership and competence of regional authorities. Te Uru Kahika want to be at the heart of an improved set of national flood risk resilience-improving structures and processes. Government are critical partners in this – but the skills lie in the regions.

Te Uru Kahika are concerned about the lack of seamless connectivity between the flood risk management roles played by DIA, NEMA, MfE, MBIE, Waka Kotahi and Crown Research

Institutes. A strong platform is required to help ensure that everyone is singing off the same song sheet to:

- Get the right flood management infrastructure in the right place at the right time.
- Make optimal contributions to the climate change adaptation initiatives described – or likely to be described, in the Natural and Built Environment Act, the Spatial Planning Act and the Adaptation Act.
- Stay ahead of critical future information needs e.g., by ensuring LIDA information is available nation-wide.

Refining cost share / co-investment ratios

Co-investment rates for the 57 resilience projects approved by Government in 2021 (65% for wealthier regions and 75% for less wealthy regions) are viewed by Te Uru Kahika as being reasonably equitable. The 'Before the Deluge' report suggests a cost share arrangement of 60% and 75%.

These cost share arrangements should be further refined to reflect the 'nature of the work' to be undertaken more clearly. Te Uru Kahika's early thinking is to perhaps cost share at rates of 75% for 'new' works, 50% for upgrades, and 33% for maintenance works. Around these rates there could be some flexibility to adjust them by no more than +/- 10%. Such decisions could be delegated to a 'fit for purpose' governance group (see below). Te Uru Kahika would welcome the opportunity to work with Kānoa to further these options.

Governance of co-funded flood risk resilience-improving infrastructure

An enhanced oversight Board and Agency could be established, to sit within and be serviced by Kānoa. The purpose of this would be to provide oversight to the 92 + projects described in the 'Before the Deluge' report and the additional projects that may be added to this list with expanded Government co-investment.

This Board should have appropriate skill - based membership, strong Te Uru Kahika / regional authority representation and powers to make decisions - albeit within appropriate policy / delegation / accountability frameworks.

The overall purpose of the proposed refreshed governance arrangements would be to oversee the efficient and effective delivery of co-funded river flood risk resilience-improving infrastructure projects across Aotearoa.

As noted earlier, the proposed enhanced Board could also provide a platform for application of an integrated multi-departmental / agency approach to the provision of flood resilience-improving infrastructure.

In addition the proposed 'Board' could have powers to facilitate and promote appropriate standards of work and approve co-funded projects and relevant variations to these projects.

The title of the enhanced governance arrangement could be the ‘River Management Flood Resilience-Improvement Infrastructure Board’.

Kānoa is the appropriate home for the proposed Board because the bones of the proposed enhanced arrangement already exist within this agency. This is via the current Kānoa ‘Climate Resilience Flood Protection Programme Advisory Board’. The capabilities, operational reach, people, and systems developed by Kānoa and the Board, have been proven to work effectively, with appropriate reach into all regions.

Proposed Te Uru Kahika flood resilience infrastructure information gathering

Based on current regional and unitary council LTPs, their total 10 year planned investment into flood resilience infrastructure is $3.1b. As recent experience shows, and in the face of evolving climate change and cost of construction / inflation challenges, additional work is required to confirm a preferred future investment quantum and framework.

Te Uru Kahika have agreed on a 2023 work programme to add detail to their preferred future investment framework. The features of this programme include the following workstreams:

- Clarify the preferred future level of service for all 367 current flood protection schemes – with the expectation that 1:100 is the minimum that should be sought.
- Define the cost to achieve that expected level of service.
- Define the priority to be accorded to flood risk resilience-improving infrastructure projects across Aotearoa.
- Negotiate the cost-share proportion with Government for different types of flood risk resilience-improving works.
- Define the intended benefits, including the cost savings from damage averted, accruing because of the proposed interventions.
- Define how proposed investment in flood risk resilience infrastructure relates to different PARA (protect, accommodate, avoid and retreat) measures, as well as insurance sector plans and Te Mana o Te Wai and environmental considerations.
- Develop protocols through which the relationship between proposed flood risk resilience-improving infrastructure proposals and Waka Kotahi, Kiwi Rail, and other network utility infrastructure resilience plans may be aligned.

ANCILLARY RECOMMENDATIONS

1. Support Te Uru Kahika as it continues to build flood risk resilience-improving collaborative capacity and capability arrangements.

2. Give near future consideration to how the central government / Te Uru Kahika co-investment formula may be further refined to better reflect regional needs and the nature of proposed river flood risk resilience-improving works.

3. Consider establishing an enhanced Kānoa ‘River Flood Risk Resilience-Improving Infrastructure’ Board and Agency.

4. Support Te Uru Kahika as it seeks to better define and participate in the delivery of an enhanced multi-tool, multi-agency and environmentally sensitive flood risk resilience-improving investment programme.

WEST COAST REGIONAL COUNCIL

To: Chair, Infrastructure Governance Group

I move that the public be excluded from the following parts of the proceedings of this meeting, namely – items 8(a)1-11 (v) (inclusive) due to privacy and commercial sensitivity reasons and that:

1. *Heather Mabin be permitted to remain at this meeting after the public have been excluded due to their knowledge of the subjects. This knowledge will be of assistance in relation to the matters to be discussed; and*
2. *That the Minutes Clerk also be permitted to remain.*

Item No	**General Subject of each matter to be considered**	**Reason for passing this resolution in relation to each matter**	**Ground(s) under section 7 of LGOIMA for the passing of this resolution**
9	Confidential Minutes IGC Meeting – 14 February 2023	These items contain information relating to commercial, privacy and security matters	To protect commercial and private information and to prevent disclosure of information for improper gain or advantage (s7(2)(a), s7(2)(b), and s7(2)(j)).
11(a)-11(g)	Contractual Matters	These items contain information relating to privacy and security matters	To protect private information and to prevent disclosure of information for improper gain or advantage (s7(2)(a) and 7(2)(j)).
12(i-v)	Financial Commitments	These items contain information relating to privacy and commercial matters	To protect commercial and private information and to prevent disclosure of information for improper gain or advantage (s7(2)(a), s7(2)(b), and