



NGĀ TAUMATA O TE MOANA IMPLEMENTATION PLAN

How we will carry out our strategy for tackling climate change

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Ngā Taumata o te Moana

Implementation plan

How we will carry out our strategy for tackling climate change

Whakatauki

Titiro ki nga taumata o te moana

Literally means - Look to the horizons of the ocean

Figuratively – Think strategically and maintain a global orientation whilst appreciating the ground upon which you stand

Te Ruki Kawiti, Jan 13, 1846

**Ko te pae tawhiti whāia kia tata,
ko te pae tata, whakamaua kia tina,
haumi e, hui e, tāiki e.**

Seek out distant horizons and cherish those that we attain as one.

Vision

Te Taitokerau is resilient in a changing climate, and transitions proactively and equitably to a thriving zero-carbon society before 2050.

Ngā kōrero takenga | Background and context

In our climate change strategy, Ngā Taumata o te Moana, we acknowledge the urgent need to respond to the climate change crisis. We are living in te ao hurihuri, the ever-changing world, where the historic and ongoing release of greenhouse gases is already altering the environment that supports us, threatening to cause severe social and environmental disruption. In the interests of unborn generations, our communities and our precious taonga, we must act now.

This implementation plan (the plan) is our commitment to take immediate and practical steps to plan, act on, and support activities that enable our region to adapt to climate impacts, while we achieve an equitable and tika transition to a net-zero carbon society.

The plan is a complementary document to the climate change strategy. It lays out specific projects that make up council's initial three-year plan to respond to climate change, with reference to the three pou of the climate change crisis: adaptation, emissions reduction and carbon removal.

Ka aha a te kaunihera? | What will council do?

The plan aligns with our climate change strategy, setting out key projects to achieve strategy objectives and outcomes. The plan aims to set out robust, science-based plans and programmes that

identify key priorities, deliver results and achieve positive long-term outcomes for each climate-change pou.

The plan describes 44 projects across four work areas: 1. climate change planning; 2. adaptation; 3. emissions reduction; and 4. carbon removal. These are arranged according to their delivery timeframes: ongoing programmes, year 1, year 2 and year 3+. The projects will require all departments in the organisation to contribute. These represent climate change-specific projects that are being developed to complement council's business-as-usual work programmes. Each project line contains a high-level project description, with information on the subject area, estimated timeframe and funding status.

Nearly all the projects have existing or future Long Term Plan funding allocated. However, there are some projects that will require additional resourcing through a future Annual Plan or Long Term Plan process (two projects) or via an external funding source (four projects). Unfunded projects have only been included where we believe they form an essential component of our comprehensive approach.

The plan is designed to be a working document that should be updated as new projects, opportunities and funding arise. It will be formally reviewed alongside our climate change strategy, following the next Long Term Plan process in 2024. Progress on the implementation plan will be reported to the Climate Change Working Party (every three months), the executive leadership team (every six months) and to full council (every 12 months).

Ongoing programmes

Area	Subject	Project	Brief project description	Timeframe	Funding source
Internal climate change planning	Governance	Governance support	Support and provide technical advice to NRC and regional governance, including Joint Climate Change Adaptation Committee and Climate Change Working Party. Includes preparing agendas, presentations, reports, workshops etc.	Ongoing programme	Existing resourcing
Internal climate change planning	Communications	Climate change communications	Support ongoing public engagement on climate change, outlined in a rolling 12-month communications plan, highlighting the work we are doing around climate change, publicising milestones, and supporting engagement with various projects that arise from the implementation plan. Also supporting the development of community initiatives to reduce emissions through providing website information, environmental awards and promoting successes.	Ongoing programme	Existing resourcing
Internal climate change planning	Policy	Review of external-facing RMA policies and plans	Review of key NRC external plans and policies such as the Regional Plan and Regional Policy Statement, to ensure alignment with legislative requirements and updates, and any new information on climate risks and emissions reduction requirements. Also to test alignment with NRC's climate change strategy, find areas for improvement and identify areas of potential inconsistency. Potential to embed rules and policies enabling better adaptation, emissions reduction and carbon removal across the region. Existing resources to undertake initial reviews, but may require additional funding depending on scale of revision required.	Internal climate change planning	Policy
Adaptation	Adaptation implementation	River flood management infrastructure	Continue to deliver flood-risk reduction programme across the region, using a prioritised approach. Continue working with WDC on aligning projects in the Whangārei Blue-Green Network programme.	Ongoing programme	Existing resourcing
Adaptation	Adaptation implementation	Water resilience project	Water-tank assistance programme delivered to support communities to catch, store and treat water for domestic use, to improve water resilience during drought. Potential to align with projects being delivered by the new hapū-focused climate change programme.	Ongoing programme	FY21-24 LTP funding
Adaptation	Adaptation implementation	CoastCare programme	Improved alignment of the CoastCare programme with regional adaptation planning programme. Identify areas of high erosion risk and develop natural solutions as interim measures during adaptive pathways planning process.	Ongoing programme	FY21-24 LTP funding
Adaptation	Adaptation implementation	Community resilience coordination	Coordinating and engaging with a range of community resilience-building programmes including multiple agencies, e.g. CDEM, FENZ, water resilience group, marae resilience (DIA, TPK), remote rural communities resilience (MPI), also funding partners and NGOs.	Ongoing programme	Existing resourcing
Adaptation	Adaptation engagement	Adaptation community engagement - technical support	Coordination and technical support for the regional adaptation programme, delivered with district councils as proposed in the Te Taitokerau Joint Adaptation Strategy. May include development of engagement methodology and materials/resources, support for technical hazards investigations where required, and assistance with adaptation community engagement, options development and analysis, and adaptation plan drafting.	Ongoing programme	FY21-24 LTP funding
Adaptation	Adaptation engagement	Hapū-focused climate resilience programme	Development of the hapū-led adaptation planning facilitation programme. Will likely include identification of community needs, partnership with hapū, development of engagement methodology, facilitation of adaptation/resilience plans, and identification of potential funding opportunities.	Ongoing programme	FY21-24 LTP funding

Adaptation	Adaptation engagement	On-farm adaptation support	Promote activities that enable adaptive management in a changing climate, while meeting goals of soil conservation, water resilience, freshwater management and animal welfare. This may include targeted hill-country soil conservation programmes, building demand for poplars and willows for integrated farm forestry, encouraging resilient pasture, aligning with NES-FWM farm plan implementation, and encouraging the provision of stock shelter and shade.	Ongoing programme	Existing resourcing
Adaptation	Investigations - climate hazards	Rain radar and flood forecasting	Access to rain radar data to provide high-resolution rainfall records in near real-time, increasing spatial coverage currently missed by existing rain gauges. Will enable three-hour 'now-casting' to assist flood hazard management and civil defence responses, as well as improving river flood models and improving projections for engineering standards for infrastructure planning, etc.	Ongoing programme	Existing resourcing
Adaptation	Investigations - climate hazards	River flood hazards	Complete region-wide river flood modelling and develop a community flood-hazard risk assessment that identifies future prioritised work programme.	Ongoing programme	Existing resourcing
Adaptation	Investigations - climate hazards	Coastal hazards	Ongoing development of coastal hazard assessment, including the development of hydrodynamic models for Whangārei and other large harbours and estuaries, as well as developing a region-wide coastal erosion risk assessment. Ongoing technical support for regional adaptation planning programme with districts and communities, including additional local hazard assessments where required.	Ongoing programme	Existing resourcing
Adaptation	Investigations - climate impacts	Coastal aquifer saline ingress	Installation of additional monitoring sites and long-term monitoring of salinity levels in coastal aquifers. Investigations and improvements to our understanding of at-risk aquifers and community supplies from sea level rise-related saline ingress. Commissioning of a research report with climate scenario projections may require external funding.	Adaptation	Existing resourcing
Emissions reduction	NRC emissions reduction options	NRC buildings	Continue to include LED lighting, solar power and other 'easy' low-carbon drivers in new builds. Investigation of further options for reducing embodied carbon in new buildings, such as using structural timber. Continue to invest in renewable energy infrastructure, efficiency and investigate efficiencies of alignment with EV charging. Align emissions reporting and forecasting methodology with UN Race to Zero criteria.	Ongoing programme	Existing resourcing
Emissions reduction	NRC emissions reduction options	NRC bus fleet	Investigation of options for improvements in bus fleet efficiency and delivery modes; further develop optional analysis, business cases and timelines for complete transition to e-buses in alignment with emissions reduction targets. Align emissions reporting and forecasting methodology with UN Race to Zero criteria.	Ongoing programme	Existing resourcing
Carbon removal	Community support	On-farm carbon removal support	Providing advice to landowners to support on-farm carbon removal activities such as afforestation, soil carbon and wetland restoration. This may include: - supporting and promoting appropriate private native afforestation projects that provide co-benefits such as biodiversity and soil conservation - helping landowners understand options for afforestation that support good land management practices, and providing information on opportunities to access the ETS - help build demand for poplars and willows for integrated farm forestry - ensuring council's land and catchment management programmes align with government and industry programmes (e.g. He Waka Eke Noa) to document and reduce on-farm emissions - using spatial planning to identify land with high potential for afforestation to reduce erosion risk and capture carbon.	Ongoing programme	Existing resourcing

Year 1

Area	Subject	Project	Brief project description	Timeframe	Funding source
Internal climate change planning	Corporate carbon management	Corporate climate positive transition plan	Development of corporate climate positive transition plan including an optimised greenhouse gas emissions reduction plan and carbon removal/offset investment plan. Will define organisational GHG emissions reduction and carbon removal targets using standard approach (UN Race to Zero criteria) and set out prioritised actions for council to become net-zero emissions before 2050, with an end goal of reaching climate positive (i.e. net negative emissions). Dependent on completion of NRC emissions reduction projects.	Deliverable Year 1	FY21-24 LTP funding
Internal climate change planning	Corporate emissions reduction investments	Annual Plan business cases	Development of Annual Plan business cases following adoption of NRC's climate change strategy, recognising that some projects may require additional funding outside the Long Term Plan process. Annual Plan business cases will be coordinated to align with the corporate zero-carbon plan and prioritise those requiring urgent investment in zero-emissions technology or investigations.	Deliverable Year 1	Existing resourcing
Internal climate change planning	Policy	NRC policy review - internal	Review of key NRC internal policies to test alignment with NRC's climate change strategy, find areas for improvement and identify areas of potential inconsistency to embed adaptation, emissions reduction and carbon removal policies and standards across the organisation	Deliverable Year 1	Existing resourcing
Internal climate change planning	Policy	Zero-carbon procurement policy	Develop/amend policy to require all business cases involving significant investments that have associated emissions to show evidence that zero-emissions options or other alternatives have been sufficiently considered. Investigate potential for including cost of high-quality carbon offsets in procurement lifecycle cost forecasts, where emissions-generating purchases are being considered against zero-/low-emissions options.	Deliverable Year 1	FY21-24 LTP funding
Adaptation	Adaptation engagement	Te Taitokerau Joint Adaptation Strategy	Coordination and drafting of Te Taitokerau Joint Adaptation Strategy and associated reports with joint staff group Climate Adaptation Te Taitokerau. Includes reports such as climate risk overview; coastal community profiles; adaptation toolbox; adaptive pathways engagement framework; and the adaptation strategy's implementation plan. Strategy to be presented to the Joint Climate Change Adaptation Committee in August 2021.	Deliverable Year 1	Existing resourcing
Adaptation	Adaptation engagement	Te Taitokerau Joint Adaptation Strategy - climate risk and Māori engagement report	Commissioning of research report to improve council's understanding of appropriate and successful engagement approaches when working with hapū and iwi on climate change issues. Will involve literature review and interviews. Outputs will provide guidance for hapū-focused climate change programme. Conducted by local tangata whenua researcher.	Deliverable Year 1	Existing resourcing
Adaptation	Adaptation engagement	Te Taitokerau Joint Adaptation Strategy - communications and engagement plan	Communications and engagement plan for the Te Taitokerau Joint Adaptation Strategy, to help promote conversations with our communities about developing adaptive pathways plans.	Deliverable Year 1	FY21-24 LTP funding
Adaptation	Investigations - climate impacts	Coastal habitat and sea level rise	Investigation of threats to coastal habitats, especially limits to landward migration with sea level rise. GIS analysis of existing mangrove, saltmarsh and seagrass habitat and expected impacts of sea level rise. Identification of potential areas for migration, and investigation of potential policy framework to enable land use change to allow landward habitat migration under sea level rise. (Also see Carbon removal - coastal blue carbon project.)	Deliverable Year 1	FY21-24 LTP funding
Emissions reduction	NRC emissions reduction options	Corporate carbon footprint audit and emissions reduction options	Commissioning of corporate carbon footprint audit and verification using accredited provider. Investigate corporate emissions reduction options across major emissions sources (see below projects in emissions reduction section). Implement consistent and verifiable emissions reporting and forecasting methodology across organisation, using standard protocols (e.g. UNFCCC Race to Zero criteria).	Deliverable Year 1	FY21-24 LTP funding

Emissions reduction	NRC emissions reduction options	NRC vehicle fleet	Investigate options to decarbonise NRC's vehicle fleet in line with zero-carbon transition plan and emissions reduction plan. Includes identification of viable alternatives, life-cycle assessments, options assessments and development of business cases. Possible short-term options may include transition of some vehicles toward EVs and hybrids; options for alternatives to replace some/all 4WD Hiluxes; optimising vehicle use behaviour; considering a shared EV fleet with WDC. Implement consistent and verifiable emissions reporting and forecasting methodology.	Deliverable Year 1	Existing resourcing
Emissions reduction	NRC emissions reduction options	NRC maritime fleet	Investigation of options for improving the efficiency of vessels, transition of vessels to high-performance hulls and electric/hybrid engines as well as fuel-saving trip programming and behaviour. Improvements in monitoring and reporting of vessel emissions. Implement consistent and verifiable emissions reporting and forecasting methodology.	Deliverable Year 1	FY21-24 LTP funding
Emissions reduction	Regional emissions	Consents and GHG emissions	Professional development and training to support resource consent team to develop capacity to assess new consent requirements re: GHG emissions in RMA from 2022. May include improving technical literacy for consent considerations such as process heat standards and processes, alternative low-carbon heat methods, greenhouse gas emissions reduction plans, etc.	Deliverable Year 1	Existing resourcing
Carbon removal	Investigations	Coastal blue carbon	Undertake a carbon stocktake of coastal blue carbon ecosystems using existing GIS data (including mangroves, saltmarsh, seagrass, kelp beds). Develop a risk assessment of the impact of sea level rise on these ecosystems and investigate the carbon removal potential of coastal blue carbon ecosystems, considering projected landward migration potential and limitations such as physical or planning barriers. Investigate options for conservation, restoration and re-establishment of blue carbon habitats, and estimate future carbon storage potential under different policy settings. Consider blue carbon ecosystem carbon values in adaptation planning programmes (see above adaptation engagement project - Awanui stopbanks).	Deliverable Year 1	FY21-24 LTP funding

Year 2

Area	Subject	Project	Brief project description	Timeframe	Funding source
Adaptation	Adaptation engagement	Adaptation community engagement - Awanui coastal stopbanks	Adaptive pathways planning project with FNDC, as per Te Taitokerau Joint Adaptation Strategy. Scoping, data collection, hazard analysis and pre-engagement during 2022, with community engagement beginning 2023 once additional adaptation staff are on board.	Deliverable Year 2	FY21-24 LTP funding
Adaptation	Investigations - climate hazards	Climate impacts - scientific review	Revision and update of Northland's climate change impact report (NIWA 2017) following release of the upcoming IPCC AR6 report in 2022.	Deliverable Year 2	Existing resourcing
Adaptation	Investigations - climate hazards	Drought vulnerability	Development of further information on drought risk to community and rural water supplies with climate change. Development of climate vulnerability assessment of community and primary industry water supplies, drawing on information from Three Waters review process. Investigation of approaches for communicating drought as a natural/climate hazard.	Deliverable Year 2	Existing resourcing
Adaptation	Investigations - climate hazards	Freshwater resilience	Resilience of Northland's freshwater ecosystems in response to climate change, including maintaining/improving resilience of freshwater environments in Northland, including highly vulnerable areas; ensuring we are meeting NPS-FM and NES-FW objectives regarding accounting for climate change aspects; a study in the form of guidance/monitoring strategy by investigating historic information for identifying the risks associated with climate change on Northland's freshwater environments, and associated ecological and human health implications; continuous long-term water quality monitoring is undertaken in at least two reference river sites and one outstanding dune lake.	Deliverable Year 2	FY21-24 LTP funding
Adaptation	Investigations - climate impacts	Ecosystems, habitat and biodiversity	Commission literature review of at-risk ecosystems (e.g. lakes, terrestrial, freshwater and marine communities, coastal/estuarine habitats) and species threatened by climate impacts. May need to separate topics, limit scope and stage reports over time. (Funding likely to be both externally through Envirolink funding (research support grants) with some support via the new adaptive pathways LTP budget.)	Deliverable Year 2	Requires external funding
Adaptation	Investigations - climate impacts	Biosecurity threats	Preliminary review of high-risk sleeper and offshore biosecurity threats under future climate change scenarios, potentially including human health, agricultural and environmental threats. Project will support and align with a nationwide regional sector programme aiming for consistent methodology, and provide a gap analysis and identify areas requiring further investigation.	Deliverable Year 2	Requires external funding
Emissions reduction	Regional emissions	Regional economy and industry leadership	Investigation of options to support the transition to a zero-carbon economy in Northland, including working with regional economic development partners, industry and the primary sector alongside government agencies and research groups. Investigate alternative funding possibilities to incentivise uptake of zero-emissions technologies and R+D.	Deliverable Year 2	FY21-24 LTP funding
Carbon removal	Investigations	Peatland/wetlands carbon storage	Commission a carbon stocktake of wetlands and peatlands using existing GIS data, with the objective to understand the carbon emissions and removal potential of peatlands/wetlands in Northland; also investigate possible approaches to enable conservation, restoration and re-establishment including changes to land management practices.	Deliverable Year 2	Requires external funding

Year 3+

Area	Subject	Project	Brief project description	Timeframe	Funding source
Internal climate change planning	Policy	NRC policy review - external	Review of key NRC external plans and policies such as the Regional Plan and Regional Policy Statement, to test alignment with council's climate change strategy, find areas for improvement and identify areas of potential inconsistency to embed adaptation, zero emissions and carbon removal rules and policies, in line with legislative requirements, other updates and new information on climate risks and emissions reduction requirements.	Deliverable Year 3+	Requires future AP/LTP funding
Adaptation	Investigations - climate hazards	Wildfire hazards	Understand council's responsibilities and the availability of data regarding increase in wildfire risk under climate change scenarios.	Deliverable Year 3+	Existing resourcing
Adaptation	Investigations - climate hazards	Geotechnical hazards	Understand council's responsibilities and the availability of data regarding increase in risk of slips and landslides under climate change scenarios.	Deliverable Year 3+	Existing resourcing
Emissions reduction	Regional emissions	Regional EV charging network	Investigation of options for how NRC can support the development of a comprehensive regional EV charging infrastructure alongside other agencies, district councils and industry partners.	Deliverable Year 3+	Requires future AP/LTP funding
Carbon removal	Investigations	NRC carbon removal and emissions offset programme	Investigate approaches for emissions offsetting and carbon removal for council, including biological options such as wetland and coastal blue carbon restoration and afforestation projects. Consider options for measuring, reporting and verifying carbon removal including co-benefits such as biodiversity, water and social. Adopt best-practice approach for carbon offsets such as the 'Oxford principles for net-zero aligned offsetting'.	Deliverable Year 3+	FY21-24 LTP funding

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