

9.3 CLIMATE CHANGE UPDATE

Information Only - No Decision Required

Report To:	Strategy and Policy Committee
Meeting Date:	24 August 2023
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1. Summary / Te Tuhinga Whakarāpoto

1.1 This report provides:

- a quarterly update on implementation of the current Tasman Climate Action Plan (2019);
- climate change updates in brief at the regional, national and international levels; and
- an update on climate change litigation.

2. Recommendation/s / Ngā Tūtohunga

That the Strategy and Policy Committee receives the Climate Change Update report.

3. Updates on progress with implementing the Tasman Climate Action Plan

- 3.1 An internal working group comprising 16 staff from across Council meets bi-monthly to ensure the current Tasman Climate Action Plan (TCAP) progresses. Highlights from the last quarter (June to August 2023) are presented in this section.
- 3.2 Two high-efficiency pumps were installed at the Richmond Water Treatment plant, replacing older and less efficient pumps. In addition to energy savings, the pumps should reduce stress on pipes in the network. An additional air receiver was installed at the Motueka Wastewater Treatment Plant - this stops the air compressors from short cycling and allows them to run at higher efficiency.
- 3.3 A web-based monitoring platform for our solar projects is being implemented. It will show daily production at each solar site and quantify the energy (and cost) savings for each solar project.
- 3.4 A revised public transport service started on 1 August, with new connections to Motueka (via Māpua and Tasman) and Wakefield (via Brightwater and Hope) alongside an increased frequency of service. The new service replaces the existing bus fleet with one where 80% of

the buses used are electric. This is the first mostly electric bus service outside of major urban centres in New Zealand.

- 3.5 The Streets for People and Transport Choice programmes are progressing. The work is in the implementation phase in Richmond. The Motueka works have been delayed due to concerns from the community regarding the loss of parking.
- 3.6 Staff are continuing to work on our first emissions inventory for the District. The inventory will identify the sources of emissions in Tasman and help us identify potential emission reduction projects moving forward. The inventory is currently being audited and will be reported to the Council later this year.

4. Regional update

Nelson-Tasman Regional Climate Change Risk Assessment project

- 4.1 As outlined in previous 'Climate Change Update' reports, we are working together with Nelson City Council (NCC) and iwi partners to undertake a [Regional Climate Change Risk Assessment](#) (RCCRA) for both the Tasman and Nelson regions.
- 4.2 This work is being led by consultant [Urban Intelligence](#). The project aims to assess and interactively communicate climate change risks in the region, as well as cascading risks and impacts¹. The outcome is a 'living' platform called the 'Risk Explorer' that can be used by councils, iwi, businesses, organisations, and communities for climate adaptation planning, asset and spatial planning, and emergency planning.
- 4.3 A briefing on the project and a demonstration of the Risk Explorer tool was delivered to Councillors on 3 August 2023. Domain workshops will be held in September and place workshops in October.

Nelson City Council (NCC) update

- 4.4 Last month NCC appointed a Climate Change Adaptation Advisor and a Climate Change Programme Coordinator, bringing the total capacity to 4.5 FTE. The new carbon analyst started in mid-May. Discussions between Tasman District Council and NCC are underway to explore sharing the new carbon analyst capability.
- 4.5 NCC is currently assessing budgets for the LTP, which will be reviewed in September.

Nelson Tasman Climate Forum update

- 4.6 Staff and Councillor representatives have continued to attend monthly Leadership Group hui of the [Nelson Tasman Climate Forum](#).
- 4.7 [Nelson-Tasman Climate Action Week](#) was held from 26 May to 3 June. Mayor King spoke at the Ben & Earth Community Composting launch and Council staff contributed to a webinar on active transport and a composting workshop in Appleby. A summary of the week, including attendance at events, is provided in Attachment 1.

¹ Cascading impacts from extreme weather/climate events occur when an extreme hazard generates a sequence of secondary events in natural and human systems that result in physical, natural, social or economic disruption, whereby the resulting impact is significantly larger than the initial impact (IPCC).

- 4.8 Attachment 2 provides an overview of projects the Forum has progressed between 2021 and 2023.

5. National update

Toka Tū Ake EQC Natural Hazards Portal

- 5.1 In late July, Toka Tū Ake EQC/the Earthquake Commission launched a natural hazards portal on their website: www.NaturalHazardsPortal.govt.nz
- 5.2 The portal presents EQC claims information at a property specific level for settled claims since 1997 (not active claims). The portal also provides a range of educational information about natural hazards, incorporates climate change considerations, and links to other organisations such as GNS, NIWA, GeoNet and councils who hold natural hazards information/maps/models.
- 5.3 Staff are currently working on the development of a platform to make all Tasman District's natural hazards information publicly available in an easily accessible format on our website (this platform will complement the EQC portal). In future, an advice note will likely be added to LIMs to highlight the availability of the EQC portal, in the interest of enabling individuals and landowners to better understand natural hazards and manage their own hazard risks.

Update on the Ministry for the Environment's (MfE) adaptation work

- 5.4 Adaptation is a key priority of the Government. As the Minister for Cyclone Recovery has said, the Government is working to take action quickly to provide certainty and assurance for regions which are recovering. Alongside that immediate work, the national adaptation plan sets out the Government's long-term strategy to build our climate change resilience and the actions we will take over the next six years to move towards this.
- 5.5 MfE's adaptation work programme is centred around the priority areas in the national adaptation plan:
- ensuring that planning and infrastructure investment decisions drive climate-resilient development in the right locations. In addition to the Resource Management reform, the Ministry is considering what can be done to restrict further development in high-risk areas through national direction under the National Planning Framework, and what else might be needed as we transition to this framework;
 - laying the foundations for a range of adaptation options including managed retreat through the Climate Change Adaptation Bill; and
 - the Ministry is developing further information, tools and guidance to enable better risk-informed decisions. This includes data on the latest climate change projections, guidance for dynamic adaptive pathways planning, updated coastal hazards guidance, guidance on using different socio-economic scenarios for adaptation planning and exploring options to develop an All-of-Government Climate Action Hub.
- 5.6 Other work is also being progressed across government to support these priorities, and to embed climate resilience in all government strategies and policies.

- 5.7 MfE is continuing to develop the Climate Change Adaptation Bill, which is anticipated to be released for feedback in 2024.

Inquiry proposed into community-led retreat and adaptation funding

- 5.8 On 15 August, the Minister for Climate Change announced that he has asked the Parliamentary Environment Committee to open an inquiry into community-led retreat and adaptation funding.
- 5.9 In anticipation of an inquiry, the Ministry for the Environment has published a paper, [Community-led retreat and adaptation funding – issues and options](#). This paper looks at the current system and what new powers, roles and responsibilities might be needed to support community-led retreat, as well as how the costs of adaptation might be met.
- 5.10 It also considers how a Te Tiriti-based adaptation system could work for iwi, hapū and Māori communities and how lessons learned from past severe weather events and natural disasters might be considered for recoveries in the future.
- 5.11 The Ministry has also published a [technical report into retreat](#) by the Expert Working Group on Managed Retreat, chaired by Sir Terence Arnold KC and including experts in Te Ao Māori.

Managing risks from natural hazards under the Resource Management Act

- 5.12 In the reformed resource management system, it is intended that the National Planning Framework, Regional Spatial Strategies and Natural and Built Environments Plans will work together to avoid and manage development in areas subject to natural hazard risk.
- 5.13 In the meantime, MfE is exploring what additional national direction might be needed under the Resource Management Act for natural hazards. This would then be transitioned over to the new resource management system in the future.
- 5.14 It may take some time to introduce new national direction, so MfE are also considering whether anything additional is required to limit or prevent new development in areas at high risk from natural hazards.

Environmental Defence Society managed retreat advice

- 5.15 The Environmental Defence Society (EDS) is a not-for-profit think tank and advocacy society with membership of, or access to, specialists in various environmental fields. The second instalment of the EDS's response to the Government's expressed intention to develop policy for managed retreat has been released: [Current legislation and policy framework for managed relocation](#).
- 5.16 This working paper focuses on evaluating the adequacy of the current law and rights-based systems applicable to managed retreat. The structure of the report includes:
- Part One describes the current property and rights framework that will underpin any managed relocation policy in Aotearoa New Zealand;
 - Part Two describes the legal and policy framework that currently applies to managed retreat as well as the impact of current reforms to that framework; and

- Part Three summarises the key weaknesses and gaps in the current system which will need to be addressed either in the new Climate Adaptation Act or through other legislative amendments.

5.17 The final paper in the series is expected to present options to address gaps in the current system with the Climate Adaptation Act or other legislative amendments, due in late 2023.

Changes to emergency management legislation

5.18 In May the [Emergency Management Bill](#) to replace the Civil Defence Emergency Management Act 2002 was introduced to Parliament. As described in the Bill's explanatory note, the Bill makes changes to improve the performance of the emergency management system and modernise the current legislative and regulatory framework. It establishes a more flexible regulatory framework for setting standards and managing the emergency management system across the four stages of risk reduction, readiness, response, and recovery (known as the 4 Rs).

5.19 The Bill also retains the existing functions and powers it provides for managing emergencies at local, regional, and national levels.

5.20 The emergency management system is undergoing improvements to ensure:

- communities are better prepared to respond to and recover from emergencies;
- iwi and Māori participation is recognised, enhanced, and valued;
- the impacts of emergencies on people, the economy, and the environment are reduced; and
- the emergency management system is well-co-ordinated, high-performing, and enjoys widespread trust and confidence.

Farm-to-forest conversion

5.21 On 14 June, Minister for Forestry, Hon Peeni Henare and Minister for Emergency Management, Hon Kieran McNulty [delivered a statement](#) regarding the tightening of rules for farm-to-forestry conversions whilst also allowing communities a greater say in local outcomes.

5.22 Minister Henare stated that, "Afforestation provides sequestration to offset gross emissions, bioenergy to support a low carbon transition and substitution for higher carbon materials. However, large-scale change in land use for exotic carbon forestry, if left unchecked and without any management oversight or requirements, has the potential for unintended impacts on the environment, rural communities, and regional economies."

5.23 Given significant weather events in recent times and the impact of exotic forestry on local communities, concerns from Tairāwhiti, Wairoa and the Tararua District have been taken into account. "Local communities, through their councils, will determine the location and the extent that carbon forestry can occur," Minister McNulty said.

5.24 Furthermore, greater consideration will be given to implementing environmental standards, such as firebreaks, regulations for planting close to waterways and wetlands.

Forestry slash inquiry report released

- 5.25 The [Ministerial Inquiry](#) report into land uses associated with the mobilisation of woody debris (including forestry slash) and sediment in Tairāwhiti/Gisborne and Wairoa, '[Outrage to Optimism](#)' was released in May. Part of the report, with engagement file notes and public submissions, will be published at a later date.
- 5.26 The report's recommendations include, enactment of legislation and regulatory improvements, inclusive regional governance arrangements, and responsible forestry planting, felling and management practices as essential actions. A key recommendation throughout the report is to transition to diverse 'mosaic' land use which is matched by the natural characteristics of a given catchment.

A guide to just transitions launched

- 5.27 '[A guide to just transitions | He puka arataki whakawhitinga tika](#)' is designed to help communities run their own just transition processes in response to key challenges like climate change, automation, and the transition to renewable energy. It provides practical ideas, tools and case studies.
- 5.28 The guide was commissioned by MBIE and developed by a team of over 25 contributors led by Motu Research. The team tested the structure and content in the guide with members of different communities from around the country. It covers four stages of community-driven just transition processes: connecting, planning, acting, and adapting. It has been designed so people can pick and use what is most relevant to them and their communities.

Capturing climate data

- 5.29 As part of Budget 2023, \$24.7million was committed to the [Climate Data Infrastructure initiative](#) under the Climate Emergency Response Fund (CERF), involving all of Government and led by the Ministry for the Environment.
- 5.30 Part of the initiative will establish a central repository of all climate change data with the aim of making it more accessible for anyone wanting to use this information.
- 5.31 The funding is set to help standardise modelling and reporting systems, build an evidence base for policy development, and centralise and improve core climate change data sets.
- 5.32 Furthermore, the Ministry is interested to hear from organisations that hold climate information and may be interested in partnering on this initiative. Expressions of interest can be submitted via their Climate Data Project [online form](#).

Agriculture Sector – Climate Change Scenarios

- 5.33 The Aotearoa Circle has released its report on the [Agriculture Sector Climate Change Scenarios](#), as part of its [Agri-Adaptation Roadmap workstream](#). Aotearoa Circle states that as the largest contributor to the economy, the agriculture sector faces major disruption the political drive to reduce absolute greenhouse gas emissions and the economic need to build resilience in the face of a changing climate.
- 5.34 The development of these climate change scenarios provides consistent data for the sector who are seeking to mitigate and adapt and will serve as the basis for the Agri-Adaptation Roadmap. A comprehensive strategy and roadmap of actions for how the sector can adapt

to a changing climate and the extreme weather events, natural resource constraints, land-use changes and supply chain disruptions that come with it, is now critical for ensuring food security in New Zealand as well as the resilience of our key export market.

Consultation opportunities

- 5.35 MBIE and MfE consulted on [strengthened national direction on renewable energy](#), with submissions closing on 1 June. The Environmental Policy team prepared a submission, which was retrospectively approved at the 10 August Tasman District Council meeting.
- 5.36 He Pou a Rangi / Climate Change Commission (the Commission) consulted on its 2023 [draft advice to inform the strategic direction of the Government's second emissions reduction plan](#), covering Aotearoa New Zealand's 2026–2030 emissions budget. Submissions closed on 20 June 2023 and the Commission will deliver their final advice to the Minister of Climate Change by 31 December 2023. The Commission visited the Council on 4 May. Staff shared their views on the draft advice at this meeting and prepared and lodged a submission from Council, which was retrospectively approved at the 10 August Council meeting.
- 5.37 The Commission's [calls for evidence to support its work on NZ's emissions reduction targets and emissions budgets](#) closed on 31 July 2023. The Council did not engage in this opportunity, but staff encouraged the Nelson Tasman Climate Forum to discuss their work on regional emissions with the Commission.
- 5.38 On 13 June, the Department of Prime Minister and Cabinet released a [discussion document on enhancing the resilience of Aotearoa New Zealand's critical infrastructure](#) for public consultation. The purpose of the consultation was to seek feedback on:
- the need to adapt our approach to critical infrastructure regulation, to create a more secure platform for sustainable, inclusive, and productive growth in the future
 - potential options for delivering a more resilient critical infrastructure system.
- Online sessions about the work programme were held in July and submissions closed on 8 August 2023. The Council did not make a submission.
- 5.39 The Government is [reviewing the New Zealand Emissions Trading Scheme \(ETS\)](#) to make sure it's fit for the job ahead. The review focuses on the benefits, trade-offs and risks of changing the ETS so it can incentivise gross emissions reductions, but continue to support removals. It follows advice from the Commission, which recommended that the Government consider amending the ETS to provide more robust support for gross emissions reductions and manage the amount of exotic forest planting driven by the scheme. The Ministry for Primary Industries also recently sought feedback on [how best to redesign the ETS for the permanent forestry category](#). Submissions on both topics closed on 11 August 2023. Staff prepared a draft submission on the latter topic, that was considered by the Environment and Regulatory Committee at their meeting on 3 August 2023. Retrospective approval of the final submission will be sought at a future Council meeting.
- 5.40 On 10 August, MBIE announced [consultation on advancing New Zealand's energy transition](#), with submissions due on 2 November 2023. Feedback is sought on policy that will set the direction and pace of change for energy in New Zealand. The consultations include:
- a plan for managing the gas industry's transition to a low emissions future;

- the Interim Hydrogen Roadmap, which sets out the Government's initial views on the future role of hydrogen in New Zealand, and outlines actions it is taking to support hydrogen uptake and areas for further consideration;
- regulations to enable offshore renewable energy development;
- market measures to ensure electricity is affordable, reliable and resilient as we transition to an expanded and more renewable electricity system; and
- how the Government's commitment to ban new fossil fuel baseload electricity generation will be implemented.

5.41 The Advancing New Zealand's Energy Transition context document provides an overview of each of these consultations and outlines how they work together to contribute to the development of the New Zealand Energy Strategy. The Energy Strategy will chart a path for the energy sector to 2050, promoting the government's objectives for a highly renewable, reliable, and affordable energy system that supports economic growth and productivity. The Council has not yet engaged in this consultation opportunity.

6. Climate Change Litigation update

Court requires Minister to address ETS error

6.1 Simpson Grierson has provided the following update on climate change litigation.

6.2 The High Court has recently ordered the Minister for Climate Change to revisit settings under the Emissions Trading Scheme. In a highly unusual turn of events, the judgment followed an admission by the Minister that he had failed to give adequate consideration to existing emissions budgets, New Zealand's commitment to reduce emissions under the Paris Agreement and the 2050 net zero target. The decision is a first, with the Minister joining with the NGO suing him to seek orders from the court.

6.3 Key takeaways:

- the decision is just the latest in a series of judgments finding that government decisions in relation to climate change have been flawed. It reinforces the power of the courts to shape how law-makers address climate issues;
- the judgment is another example of successful action by NGOs and pressure groups to effect change through the courts. While, in this case, the target was central Government, decisions by private entities are increasingly also under judicial scrutiny; and
- the case reflects that even the threat of legal action may be enough to lead to change. In this case, the Minister admitted the error before trial and the parties agreed on the orders to be made by the Court.

Facts of the case

6.4 The Climate Change Response Act 2002 obliges the Government to make annual settings relating to the volume and price of units available under the Emissions Trading Scheme. Those settings must be in accordance with New Zealand's emissions budgets, its nationally

determined contribution to global emissions (NDC) under the Paris Agreement and the 2050 net zero target in the Act.

- 6.5 The Climate Change Commission must make recommendations to the Minister as to the limits and price control settings. In 2022, the Commission's recommendations included reducing the number of units available and increasing the trigger price. The Government decided not to follow this advice, instead making a high volume of units available at low prices.
- 6.6 This prompted an application for judicial review by Lawyers for Climate Action NZ Inc (LCANZI), a charity made up of lawyers which has brought a number of high profile climate-related lawsuits in recent years. LCANZI claimed that the settings were unlawful because Cabinet had failed to adequately address whether they were in accordance with the emissions budgets and the NDC.
- 6.7 Faced with the review application, the Minister accepted that the decision was flawed and that it needed to be made again and the parties jointly sought orders from the Court to that effect. The Court agreed and directed the Minister to reconsider the unit limit and price control settings in accordance with the requirements of the Act.

Why is the decision significant?

- 6.8 The case is a good example of two key trends in climate-related litigation both in New Zealand and internationally:
 - NGOs driving change: Nearly 90% of climate-related lawsuits filed outside the US since June 2022 have been brought by NGOs, individuals or both acting together. Globally, NGOs have had considerable success in achieving change, including in the landmark judgment that the Dutch government's failure to reduce emissions was unlawful. NGOs are also instrumental in so-called strategic litigation - cases brought despite low prospects of success because they will shape debate and raise public awareness.
 - Governments under scrutiny: Historically, the majority of climate cases have named governmental entities as defendants - judicial review being an obvious and well-established tool to attack decision-making. However, the scope of climate cases is fast expanding with corporates increasingly finding themselves the targets of claims ranging from green-washing to negligence.
- 6.9 Overall, the case is a reminder that as the effects of climate change are increasingly and dramatically obvious, all actors, whether public or private, need to take care in taking actions or decisions with climate consequences.

7. International update

BlackRock launches \$2b low-carbon transition investment fund

- 7.1 On 8 August, the New Zealand Government and U.S. investment firm BlackRock (owner of SolarZero) announced the largest single-country, low-carbon transition investment fund that BlackRock has created to date.

- 7.2 BlackRock will raise a \$2 billion fund aimed at making New Zealand the first country in the world to achieve 100% renewable energy, positioning New Zealand as a global climate leader. The net zero fund aims to accelerate the development of solar, wind, green hydrogen, battery storage and EV charging projects by raising investment capital from Crown entities, including superannuation funds, and private sector funds. Clean technologies are also expected to be super-charged by the new fund's investment capital pools.
- 7.3 New Zealand has globally ambitious domestic and international climate change targets, including its international commitment under the Paris Agreement to reduce net emissions by 50% below 2005 gross emissions for the period to 2030. These targets are defined in the Climate Change Response Act (2002). The key domestic climate goals are an aspirational target of 100% renewable electricity by 2030, a commitment to net zero emissions by 2050, and a target of 50% of total energy consumption to come from renewable sources by 2035.
- 7.4 The net zero fund is a unique opportunity to accelerate the development of green energy capacity in New Zealand through the availability of much needed investment capital. It has the potential to give renewable energy developers a much smoother path for financing large-scale renewable projects across New Zealand, which may also unlock debt financing for new entrants that may not otherwise have had sufficient equity capital to succeed. In combination with the government extending the fast-track consenting process for renewable energy projects, a number of hurdles are being removed.
- 7.5 BlackRock has not yet announced details of the fund's investment criteria or mandate, but we anticipate significant interest once these are known.

World Meteorological Organisation update (WMO)

- 7.6 According to a [new update issued by the World Meteorological Organisation](#), global temperatures are likely to surge to record levels in the next five years, fuelled by heat-trapping greenhouse gases and a naturally occurring El Niño event. Key points:
- the average global temperature in 2022 was about 1.15°C above the 1850-1900 average. La Niña ended in March 2023 and an El Niño is forecast to develop in the coming months. Typically, El Niño increases global temperatures in the year after it develops – in this case this would be 2024;
 - the annual mean global near-surface temperature is predicted to be between 1.1°C and 1.8°C higher than the 1850-1900 average. This is used as a baseline because it was before the emission of greenhouse gases from human and industrial activities;
 - there is a 98% chance of at least one in the next five years beating the temperature record set in 2016, when there was an exceptionally strong El Niño. The chance of the five-year mean for 2023-2027 being higher than the last five years is also 98%;
 - arctic warming is disproportionately high; and
 - predicted precipitation patterns, suggest increased rainfall in the Sahel, northern Europe, Alaska and northern Siberia, and reduced rainfall for this season over the Amazon and parts of Australia.

Accelerating inclusive climate action remains urgent

7.7 As outlined by the [United Framework Convention on Climate Change \(UNFCCC\)](#) accelerating inclusive climate action remains urgent. Achieving the goals of the Paris Agreement requires a collective, sustained long-term effort and more inclusive climate action. While there is some progress on the latter, effective participation of youth, women, indigenous peoples, and local communities in decision-making for climate action still needs to be strengthened.

Trans-Tasman cooperation on finance and climate change

7.8 Trans-Tasman developments: climate change and sustainable finance were prominent in recent trans-Tasman leader discussions. Recent developments in inter-governmental cooperation, including the recent announcement on sector strategies. The Ministers discussed areas of enhanced cooperation, supporting accelerated climate action and once-in-a-generation economic opportunities that the clean energy transformation offers both countries. Ministers agreed to a [joint statement](#) outlining an ambitious forward work programme reflecting bilateral cooperation on climate change between Australia and New Zealand.

7.9 The [latest Ispos NZ 2023 Global Advisor Climate Change Report](#) provides an overview of public perception on climate change across Aotearoa New Zealand. Key takeaways:

- New Zealanders are increasingly concerned about the impact of climate change (80%, up from 76% in 2022), while 82% of New Zealanders are also concerned about the impacts of climate change that are already being seen in other countries around the world; 66% stated that if the government does not act now to combat climate change, it will be failing the people of New Zealand (compared to a global average of 61%);
- 65% stated that if businesses do not act now, they will be failing their employees and customers (59% global average);
- 67% stated that if individuals like me do not act now, we will be failing future generations (63% global average);
- robust studies of climate change perceptions in New Zealand, Australia and worldwide show that only very small numbers of people actually deny that climate change is happening. The figures range from between 5% to 8% of the population. However, this small minority can be influential in casting doubt on the science, spreading misinformation and impeding progress on climate policies; and
- science denial can be stopped by first explaining the psychological research into why and how people deny climate science. The best way to neutralise misinformation is to expose people to a weak form of misinformation.

COP28 calls for food systems to be included in NDCs

7.10 Food and agriculture systems will be at the heart of COP28 at the end of the year. In late July, the Presidency Team called for food and agriculture systems to be included in NDCs and stated they are looking to develop a science-based roadmap to maintain 1.5°C for food systems. Attendees have been invited to sign a Leaders' Declaration on Food Systems, Agriculture and Climate Action. It is yet to be seen how New Zealand will react to the call.

Proton battery as a hydrogen storage medium

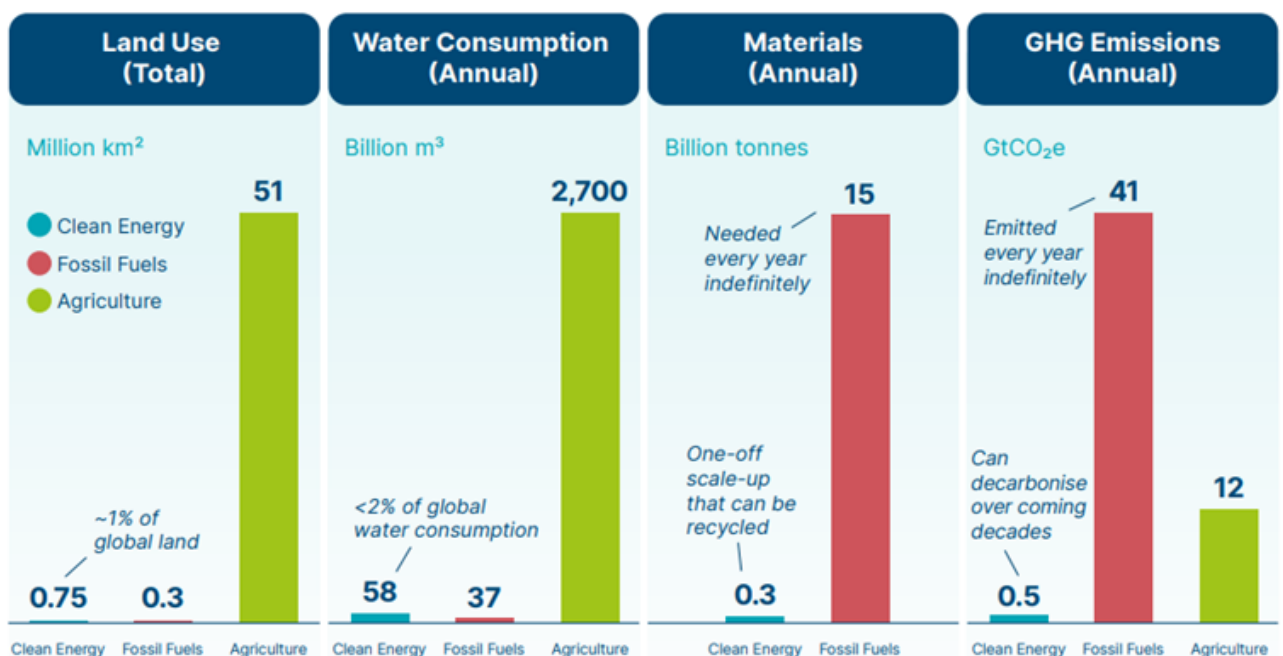
7.11 Rarely does a week go by without the announcement of a new battery technology. Researchers at RMIT in Melbourne have developed a proton battery that removes the need for high-demand metals like lithium. The team claims energy storage per unit mass is comparable with commercially available lithium batteries and is cheap, safe and much easier to recycle. The science behind the battery is the splitting and then reforming of water but without the ordinary storage demands of hydrogen.

The cost of clean energy uncovered

7.12 A global clean energy system will require twice as much land and 10% more water than the current fossil-fuel based system, reveals a comprehensive new analysis from the Energy Transitions Commission. But it's not all bad news. These figures pale into insignificance when compared with the land and water use required by agriculture meaning only a very minor shift in land use is required to enable the clean energy transition and the ability to untap the benefits of a shift away from fossil fuels. The report also takes a deep dive into the risk of shortages of critical metals for the transition.

A clean energy system will have manageable land, water and material needs, and drastically lower emissions

Energy and Agriculture, Resource Requirements and GHG Emissions



UN update on Progress on Youth2030

7.13 The UN has published a [report](#) on progress made in the implementation of global youth commitments and in advancing youth focus in UN strategic planning processes. The report emphasises meaningful youth engagement within the UN system and highlights progress

made in ensuring youth's active involvement in decision-making processes, along with their contributions to advancing UN work "for and with youth."

7.14 Currently in its third edition, the report tracks progress in advancing Youth2030. The report highlights that the UN system continues to advance on:

- making data and evidence on youth widely available and setting standards for work on youth, with progress "evident" on generating data and evidence on youth left behind;
- establishing programmes, projects, and partnerships on youth;
- supporting governments in policymaking in the areas of: aligning national policies to the SDGs; improving policy coherence; leaving no one behind; making available disaggregated data; improving public financing on youth and development; mainstreaming youth engagement in the design, monitoring, and review of sectoral programmes; and improving in-country coordination on youth;
- building the capacity of stakeholders and supporting the exchange of knowledge on youth; and
- advocating and communicating on youth issues.

8. Attachments / Tuhinga tāpiri

1. Summary of Climate Action Week 2023
2. Summary of Climate Forum Projects 2021-2023

Attachment 1 - Climate Action Week 2023 events and summary data

Measurable Outcomes

- 30 events and initiatives held between 25 May and 4 June 2023.
- 6 events held in Tasman, including 2 events in Golden Bay/Mōhua.
- At least 27 in-kind community partnerships: councils, libraries, businesses, and community organisations.
- 9 print media articles and 2 radio interviews/conversations.
- Estimated 950+ people attended events across the week.
- Online events allowed people throughout NZ to view/participate.
- Over 87 hours of volunteer time contributed by Forum members.
- Paid Forum staff exceeded their weekly hours (by 40-60 hours each).
- \$6,420 (excl. GST) total spend.

In-kind Partnerships

• Nelson City Council	• Tasman District Council
• Nelson District Libraries	• Tasman District Libraries
• Community Compost	• Landcare Trust
• Waste No More	• Tasman Environmental Trust
• Businesses for Climate Action	• Kombucha Bros
• Hybrid Bikes	• Rev Bikes
• Happen Films	• Community Compost
• Nelson Market	• Nelson Seed Library
• Whakatu Nelson Urban Farmers	• Victory Community Garden
• Garden to Table	• Natural Nosh
• Motueka Community Garden	• Waimarama Community Garden
• Nelson Sustainable Transport Trust	• Nelson Tasman 2050
• Landcare Trust	• Mohua 2042
• Golden Bay Sustainable Center	

Events that ran all week

Earth Emotions

The online version of the Earth Emotions exhibit was linked throughout the week and shown in person at the Climate Action Week launch event (Ben & bEartha Film Event) on Saturday 27 May.

Library Climate Books and Forum Info

Climate Action Week Posters, Climate Action Books, and Forum information was distributed at the three Nelson libraries (Elma Turner, Nightingale, Stoke), Richmond Library and Motueka Library.

Daily events

Regenerative Farming Talk (25 May)

This was run by Landcare Trust but we supported with an article in Farmers Monthly. About 70 people attended.

School Strike for Climate (26 May)

Perhaps 10 Forum people attended, but it was difficult to quantify. Excellent speeches by young people. Perhaps 200 people in total.

ROOTS Plant Based Food Contest and Retro Fashion Show (26 May)

About 100 people were present, perhaps 16 Forum people there, so many people from beyond the Forum's base. Music and dancing were very good. Retro fashion show was visible and fun with 32 entrants. Plant-based food competition didn't work as well with only three food vendor entrants. Jace Hobbs, the organiser, felt this was largely because it was a Friday evening and typically a busy night for caterers and businesses. The Forum message and information was fairly muted. At least 30 hours of volunteer time recorded for event organisation.

Nelson Market Stall (27 May)

The cost of a market stall was gifted to the Forum by the Nelson Market founder and managing director Nita Knight. We used the Forum's new gazebo, Take the Jump Wheel and posters, and had numerous Climate Action Week event posters and handouts. Overall, the Forum was there from 7am-1:30pm, interacted with about 45 people, and used 11 hours of volunteer time.

Repair Cafe (27 May)

A Repair Cafe was held at Victory Community Center in Nelson. A total of 30 items were brought in for repair and 23 were able to be fixed: 7 of these were powered items and 16 were unpowered. 83 kg of waste and 290 kg of CO2 emissions were prevented.

Compost Club Working Bee (27 May)

This is a weekly event hosted by the Community Compost and the Compost Club. Similar to last year, they agreed to collaborate on the working bee on the 27th by listing it on their website and Facebook pages; and the Forum advertised the event through our networking and outreach channels.

A dream for Nelson (27 May)

Three Forum members hosted their 'A dream for Nelson' interactive exhibit in a parking space on Trafalgar Street for two hours. The city was very busy at that time with the Nelson Market on and the group interacted with numerous people. Six hours of volunteer time recorded.

Ben & bEartha Film Event (27 May)

This was a collaborative event with Happen Films and was used to launch Climate Action Week. The event was well attended, with 233 tickets sold online and 13 sold at the door for a total of 246 people. A number of community organisations had booths: Waste No More; Community Compost; Take the Jump; Tasman Environmental Trust; Nelson Seed Library; Whakatu Nelson Urban Farmers, Victory Community Garden, and Garden to Table. The evening was catered by Bear and Lion food, and Kombucha Bros donated a keg of kombucha. Music was provided by AJ Hickling. Both Mayors were invited to speak. Nelson Mayor Nick Smith couldn't make the event, but Nelson councillor Rachel Sanson hosted/facilitated the evening. Tasman Mayor Tim King spoke. At least 12 volunteer hours were recorded during set-up, clean-up, hosting the Take the Jump Booth and checking tickets at the door.

Motueka Market Stall (28 May)

We used the Forum's new gazebo, Take the Jump Wheel and posters, and had numerous Climate Action Week event posters and handouts. The weather was inclement, so the interaction was not optimal. Overall, the Forum was there from 7am-1pm, interacted with about 15 people, and used 10 hours of volunteer time.

TET Native tree planting (28 May)

A planting event was held in collaboration with the 'Battle for the Banded Rail' and Tasman Environmental Trust in the Waimea Inlet, with the aim to restore habitat for birds (including the Banded Rail) and trapping predators.

Rally for Travel Justice (28 May)

This event was organised by Elizabeth Dooley and hosted in collaboration with NELSUST (the Nelson Sustainable Transport Trust). The rally was held in Nelson from 1-2:30pm and about 50 people turned out to support safer streets. Speeches were made by Councilor Rohan O'Neill-Stevens, Kindra Douglas, Astrid Sayer, Robin Treadwell and Caleb Marcus.

Mend and Movie (29 May)

This drew 15 participants, including two current Forum members. Jacqui was an excellent facilitator and people gave very positive feedback about the session. It generated good social media responses (engaging photos). It could have drawn more people if it had been posted on social media and put the posters up earlier (they were put up three days before the event).

Victory Community Garden Working Bee (29 May)

Details of attendance not provided.

WEBINAR: Decarbonising Transport with Dr Paul Winton and Jane Murray (TDC) (29 May)

This webinar was well attended (around 50 attendees, for 61 registrations) and followed by lots of positive feedback from those who took part. The transport group is keen to follow up on the ideas put forward. This webinar had around 90 views on Youtube as at 23 June.

Stitch-it don't ditch-it (30 May)

A bi-weekly event that collaborated with the Forum as part of Climate Action Week. 15 members of the public turned up to stitch garments needing mending while sitting in the sunshine along Trafalgar Street.

Waimarama Working Bee (30 May)

Details of attendance not provided.

E-bike Expo and Test Riding (31 May)

The Forum collaborated with two local E-bike businesses - Hybrid Bikes and Rev Cycles - to host a test riding expo in Nelson along the Maitai River next to the Trafalgar Center. The Forum and Take the Jump also had a booth. We interacted with about 55 people, with half of those taking test rides and one person buying a new bike. The weather was beautiful and the location was great for test rides, but if we do the expo in this location again we need better signage throughout town and advertising further in advance. 12 hours of volunteer time were recorded.

Golden Bay Sustainability Tour (31 May)

A nice cooperation with Mohua 2042. They visited four sustainable businesses in Golden Bay and filled the 20-seat bus. The experience was really positive and they were happy about the financial help of the Forum to make this possible.

WEBINAR: Human Rights: Using them for climate action and a just transition (31 May)

The webinar was hosted by Forum member and volunteer Robin Schiff, supported by Christina Simkanin. A total of 28 people registered for the event with 16 attending on the night. The group watched a talk by Josephine Gray - a Canadian activist and human rights expert - and then discussed the presentation for 30 minutes afterwards.

WEBINAR: Take the Jump (1 June)

This meeting, attended by approximately 20 participants, provided an opportunity for people to learn more about the Campaign and ask their questions. From this webinar, several people said they were keen on being part of the next cohort of Ambassadors.

WEBINAR: Urban Regeneration (2 June)

Very good material and presentation, with 20-30 participants. Good online resource. Unsure if break-out room time worked. Lunch timeslot appeared to work. **Friends of the Matai working bee (2 June)**

Two people attended after viewing CAW advert, in addition to the regular volunteers. Difficult to find location of working bee. The group was a little bit disappointed by the lack of media coverage, but

they enjoyed the exercise, creating signs and raising awareness in the vicinity. They've brainstormed ideas to increase attendance at future working bees.

Motueka Community Garden Working bee (2 June)

Including this regular working bee (every Friday morning) in the CAW programme doesn't seem to have attracted additional attendees. However, a first contact has been made, leading to possible future partnerships.

EV Trade Show Test Drive (3 June)

Sunny but very cold windy weather. A coffee cart was there, and the event was well attended by the car dealers. Participants were happy to be able to find lots of information at the same place, and benefit from the advice of other customers. Interestingly there was a feeling of a lower attendance than the previous year, which was a rainy day. Car dealers seemed to be happy with the event, however.

Richmond Compost Workshop (3 June)

20 participants. Rex Hunt of Willowgrove Organic Nursery was well prepared and people asked lots of questions, and left feeling confident about their composting ability.

Edible Weed Walk (3 June)

Approximately 12 people were shown through the Waimarama Community Garden, learning about health benefits of "weeds". A nice opportunity to reconnect to our environment. Sally Rees, from Natural Nosh, led the workshop for a cost of \$20/person. Feedback from some participants suggested this fee was slightly too expensive – could consider using Forum funding to make it a free event next year?

Crop Swap (4 June)

Details of attendance not provided.

Seed Library Working Bee (4 June)

Details of attendance not provided.

Lessons Learned during Climate Action Week 2023

- Roots. Very good to have music and dancing as part of CAW. Would be good to have an event in which the climate message is stronger.
- Media: We had good newspapers and social media but not enough radio coverage (tried contacting the radio stations but did not hear back).
- Media: Should have invited the media to the Ben + bEartha premiere. Wasn't clear on how to give away free tickets, and how many. TVNZ were invited to the EV Expo but had no response. Could have invited media to the e-bikes, the Gecko mending event, the webinars (particularly Paul Winton webinar).
- Important to better differentiate what is organised by the Forum (for which we take the responsibility of the organisation) and what is organised by our partners.
- Plan and advertise further in advance: we should be able to prepare the next CAW and inform our partners about it at least six months in advance.
- Business partners have different reasons for participating than community groups (i.e. to sell a product or service) and it's important to keep these reasons and needs in mind when inviting collaborators.
- Can councils support advertising better in future?
- For any future bus tours, it would be good to have capability to answer the questions while everyone is on the bus. Also perhaps do Golden Bay and another location next year.

- TDC Councillor Celia Butler knows of a person who would be willing to include a bike repair event in Tākaka, with some support.
- Could we do a wind-up and/or a wind-down or closing webinar? The week was very busy - hard to keep up with everything and it feels like some things were missed, or perhaps people would find it easier to get the highlights in a shortened form.
- Comment from last year about social media, still not resolved in 2023.

Lessons Learned during CAW 2022

- Need better, more coordinated, and streamlined follow-up with registrants, attendees, and people interacting on our social media channels. This was not done well because some of the systems we used - NING, Zoom, paper copies for example - aren't integrated or automated. Also, on our socials we weren't able to keep up with who was interacting and lacked a strategy for following up with them.
- The Forum's three paid staff were at their capacity limits and all three exceeded their normal/budgeted working hours by 3 or 4 weeks. Which means that they were able to take 3 or 4 weeks of paid leave. This isn't ideal, as this leaves the Forum without a person in this role for subsequent weeks after a large event.
- Events using the Forum name need to have a paid staff member present and involved, as a few of the events that didn't have this weren't run as well and this can impact our reputation in the community.
- No last minute events - need a strict deadline for organisation.

Comms / Media data

Printed materials:

• 10 posters	• 2 flyers
• 1 Take the Jump (TTJ) business card	• 2 billboard modifications (paid for by NCC)
• 1 wheel (TTJ)	• 5 banners (TTJ)
• 3 promo boards (TTJ)	• 1 scheduled advertisement for newspapers

Online

- 3 newsletters

Facebook reach May 10- June 6:

- 12,854 views (Includes Paid: 7406)
- FB spend: \$84.15
- FB Posts: 45
- FB Likes - Top group is women in the 35 to 44 yr old age bracket, 72% women overall.
- Highest reach: Post about The Leader CAW edition
- Most reactions (29): Post about ebike event

Instagram:

- Insta posts: 22
- Reels: 4

Metservice ad

- Unsure how it affected visits to the Forum website, but when we switched it to the TTJ ad, visits to the NZ website jumped. We had about 200 over the weekend, while the ad was streaming.

Mailchimp audience

- 43 new subscribers from early May (making a total of 973 subscribers - 1364 contacts)

Attachment 2 - Summary of Climate Forum projects 2021-2023

1. Launch of the new Forum website

This project, completed in early 2023, replaced the previous 'Ning' website with a more streamlined Nelson-Tasman Climate Forum website.

2. Local Climate Action Weeks 2022 and 2023

Forum staff and a large number of Forum volunteers are involved in planning, coordinating and implementing a climate action week for the Nelson-Tasman region. Climate Action Week is a week of (largely) free action focused events, workshops and webinars. The inaugural event was held in June 2022 and the 2023 event was held during the week 25 May to 4 June. In 2022, Climate Action Week included 19 climate action events in Nelson and Tasman over eight days and attracted over 500 number of participants. The 2023 event included 30 climate action events over eight days and attracted over 950 participants.

3. Raising the Nelson Tasman Climate Forum's profile through newspaper articles and presence at locally organised events

The purpose of this project is to show that certain climate actions are good for household budgets and the planet and to raise the public profile of the Forum. Forum volunteers undertook writing articles for publication in the Nelson and Tasman Leader, while other volunteers organised to have a Forum table at the Positive Aging Expo in Richmond during September 2022.

4. Climate Action Book Distribution Project

This project is led by the Climate Action Plan group who, after a first experience with one supermarket in Nelson who responded very positively, decided to extend this by finding volunteers to look after other supermarkets in the region (one supermarket per volunteer, to watch the number taken and top them up as needed). Books are now available in the Motueka Library, Nelson Library, NCC office and other locations.

5. Climate Action Book poster

The Climate Action Poster arose out of work on the Climate Action Book (CAB). The aim is to present an instant flash and creative representation of the CAB, that can inspire and generate changes.

6. 'Take the Jump' behavioural change campaign

If the Nelson-Tasman region is to make a meaningful and proportionate contribution to the national and global response to the climate emergency, this requires changing the behaviour of individuals, families, businesses, community groups of all kinds, councils, and relevant national agencies (in the regional divisions). This can best be achieved through a sustained long-term behavioural change programme based around a simple and compelling objective.

The Forum has launched and funded (through volunteer time, donations, and project starting funds from Nelson City Council) a campaign called 'Take the Jump' which centres around the vision 'Less stuff more joy'. Forum project coordinators connected with the founders of the 'Take the Jump' campaign in the UK and completed a training course on the science and methods of behavioral change programs. Take The Jump is going to stay with us for some time. It answers a need for specific information on what individuals can do to reduce environmental impact and increase planetary and personal wellbeing.

On July 19th 2023, a five-week Take The Jump Ambassador training programme started. This training provided an opportunity to practice talking about climate change and explore our own experiences and ways of communicating.

7. Repair Cafe

The Repair Cafe project is a monthly event, hosted at Restore in Tahunanui, where members of the public attend to receive help with repairing used items, to reduce waste to landfill and support people to learn new skills together. This project is funded by Nelson City Council under an additional grant from the waste minimisation fund.

8. Quantifying carbon sequestration in the region

This project was carried out in 2021 by members of the Forum's Science and Technology group. It aims to quantifying carbon sequestration in terrestrial and marine ecosystems (actual and potential) throughout Nelson and Tasman and includes the collaboration of climate change staff at both councils.

9. Blue Carbon Core and Restore Project

In 2022, the Forum helped fund (through Rata Foundation and Tasman Environmental Trust) the Core & Restore: Enhancing Estuaries in Te Tau Ihu project. The project aims to measure blue carbon stored in estuaries across Te Tau Ihu and work with the wider community to protect and restore them. This project supports climate mitigation (carbon storage), adaptation and helps inform the protection of a vulnerable ecosystem (salt marshes) with broad biodiversity benefits.

10. Engaging local government on biodiversity and carbon storage overlap

The aim of this project is to engage with both TDC and NCC long term plan process, Tasman Environment Plan etc. through submissions and direct contacts with councils where possible.

11. Supporting the protection and restoration of Snowdon's Bush, Brightwater

This project aims at supporting the restoration of the newly acquired land at Snowdon's Bush, Brightwater through planting with resilient indigenous trees (drought tolerant) and collaborating with the local community.

12. Supporting Mōhua 2042

Mōhua 2042 is a sustainability strategy and forum based in Mōhua/Golden Bay. Details on their vision, mission and goals can be found [here](#) and [here](#). The organisation set up a Charitable Trust to oversee the realisation of their vision and the projects that enable that. The Trust comprises of community leaders in Golden Bay from different sectors (e.g., business, health, social support, environment etc). The Forum shared knowledge and advice with Mohua 2042 and contributed towards a 'sustainability tour' in Golden Bay during Climate Action Week 2023.

13. Map of edible trees on public land across the region

The aim of the edible mapping project was to work alongside councils and the DHB, as well as local volunteer groups, to maintain and map local new and existing edible fruit and nut trees as well as community gardens and forage spots. The goal was to create an easily accessible resource which could be used throughout the community. This project began and was put on hold, possibly to be returned to again.

14. The Climate Fresk – an Interactive and Educational Game about Climate Change

The Climate Fresk is a collaborative game aimed at promoting thinking about and sharing an awareness of all the elements involved in climate change. The game is based wholly on IPCC reports and involves the participants to discuss and arrange the connections between three sets of cards which cover the whole range of causes and effects of the environmental crisis we are now experiencing. A Forum volunteer trained to become a Climate Fresk facilitator and the Forum funded the printing of two sets of the adult Climate Fresk Cards and two sets of the child Climate Fresk Cards. A game trial was run with representatives from the Forum, Multicultural Nelson and Tasman District Council. Other trials are planned with the Nelson Muslim Association and Businesses for Climate Action has been contacted to try to get businesses involved.

15. Climate Conversations: Outreach Beyond the Comfort Zone

The project aims to arrange many dialogues with people around climate change, mitigation and adaptation, within the groups they naturally form to work, play and worship in the Tasman region. So far, a few groups have been approached and had conversations/information about climate change: monthly column for the Catholic church bulletin, Mohua 2042, conversation with a Baptist Pastor, Waimea Soroptimists, Tasman Bay Club.

Indirectly linked to this project, are the many connections we make with other regional groups, who get inspired by the work of the Forum, and have sometimes asked to use our Climate Action Book as a template for adaptation to their local particularities. Contacts are currently held with groups in Masterton, Wairarapa, and in the Kapiti coast.

16. Earth Emotions Exhibition - NZ PhotoFest 2022

Earth Emotions is a collaborative exhibition of local photography dedicated to sharing experiences of the multiple crises we face because we've crossed planetary boundaries. This exhibition aims to inspire change by showcasing local stories and contributing to new narratives.

Earth Emotions was endorsed by the Forum and financial support was granted for the online exhibition hosted on theexhibit.io. 150 images were submitted from 50 photographers.

Earth Emotions was also selected for exhibition at the Refinery Art Space in Nelson 31 October - 19 November 2022 (approx. 24 images were displayed) and Nelson City Library in spring 2022.

17. National Climate Action Week 2022

The purpose of this project was to have a nationwide mass action campaign to persuade politicians that the public supports the National Emissions Reduction Plan (ERP). A Climate Action Week postcard kit (that includes information about how to contact local MP's, who the Ministers are and their portfolios, short details on how to make a postcard and address it for free postage, and pointers on what to say) was created and widely distributed to other climate action groups throughout Aotearoa asking them to encourage their membership to send postcards to their local representatives in support of the ERP.

18. Sustainable Māpua event

A "Sustainable Māpua" event was held in the Māpua Hall on Saturday 17th of September 2022. This event had a clear focus on climate action and a variety of service providers were on hand to talk people through the steps to achieving, and the benefits of, living more sustainably. Aims of the project included raising the profile of the Climate Forum's work through an event in Māpua (population is 3000 and is close from Motueka with a population of 8000), involving local people as much as possible

in defining and organising the event, and enabling participants to taste what's possible in terms of local climate action.

19. Tasman District 'Meet the Candidates' Events 2022

The project objective was to hold a series of online 'Meet the Candidate' Zoom meetings – one for each of five wards in Tasman plus one for mayoral candidates. Questions were elicited from Forum members ahead of time. Only Tasman District was targeted because the Nelson Sustainable Transport Trust (NelSust) organised something similar for Nelson City.

20. Reducing Regional Greenhouse Gas Emissions from Organic Waste

A group of volunteers worked together to produce a report on the options for dealing with organic waste in the Nelson, Tasman, and Marlborough regions. Organic waste is classified as wastage from the production of food, timber, gardens, and various other kinds of fibre resources. In the Nelson Tasman region, industrial and agricultural organic waste comes from sources such as dairy production, abattoirs, fish processing, vineyards, eggs/poultry, hops, greenhouses, berries, timber processing, wood ash, cardboard, sedimentation ponds, paper, and sewage biosolids. When organic waste from across these industries, households, and hospitality organisations is sent to landfill, it decomposes anaerobically, producing greenhouse gases including methane, nitrous oxide, and carbon dioxide. Read the full report here: [Organic Waste in a Circular Economy-Nov 2022](#).

21. Letter writing campaign about packaging waste

The aim of this project is to write letters to supermarkets and the Glass Packaging Forum, initially, to question their actions on reducing packaging waste, to gain an understanding of the work that they are doing in this area to educate us on their actions, and allow us to determine how best to support or push them to do more.

22. Wasteless directory on how to reduce waste

There are a number of physical and online resources available to people in the Nelson Tasman region to reduce waste to landfill, but people aren't sufficiently aware of them. The council has produced a directory of op shops. The Nelson Environment center had an A-Z directory largely listing recycling options. The aim of this project is to create an online, searchable database of **all** the local options to reduce waste to landfill. The emphasis will be on all options such as, repair, re-use, rot, reduce, loosely following the waste hierarchy, not just recycling options. This website is nearly completed and currently being beta tested (July 2023).

23. Sea level rise - 3D display model

The aim of this project was to create a "physical 3D model of the impacts of sea-level rise" on a computer screen for Nelson, so that people could more easily relate to what the projections are for the future. This 3D Model is still under discussion, as what was originally thought up doesn't fully stand up scientifically and practically.

24. Staying Healthy and Connected workshops

In 2021, a series of 'Staying Healthy and Connected' mini workshops were created and held by Forum volunteers; each 45 minutes with 2 facilitators (a lead and support). The workshops were offered through existing clubs, societies and networks to empower and energise participants to take action on climate change.

25. Student Art Expo 2021 and 2022

The purpose of this project was to exhibit local school student art, photography, and writing on climate change, in order to encourage students to express their feelings around climate change and climate action. The first Art Expo was held in December 2021 where 40 pieces of art were submitted by young people ranging in age 6 to 17 from schools across both Nelson and Tasman. A second iteration was held in May 2022 during Climate Action Week where 42 pieces of art were submitted by 35 students ranging from ages 5 to 14 from across Nelson and Tasman. This project was partly funded by the Tasman Network Charitable Trust.

26. Cawthron Science Prize 2021 and 2022

With the help of a handful of Forum volunteers the Forum sponsored a special 'Climate Challenge Award' at the 2021 Cawthron Scitech Expo and a silver award at the 2022 Expo.

27. Microforest demonstration

A Forum volunteer created a 100-square metre microforest on his property in Enner Glynn, Nelson. By utilising native plants, microforests create biodiversity hotspots and sequester carbon dioxide. The microforest was built to follow the principles of Akira Miyawaki, a Japanese botanist who initiated the microforest movement. However, this microforest had the added twist of utilising homemade biochar. Forum volunteers occasionally help support with weeding and upkeep of the forest, though most of this is done by the volunteer himself and the Nelson Muslim Association, and there have been two Forum centered events at the microforest to bring attention to and stimulate microforest development by others.