9.6 CLIMATE CHANGE UPDATE

Information Only - No Decision Required

Report To:	Strategy and Policy Committee
Meeting Date:	30 September 2021
Report Author:	Anna Gerraty, Senior Community & Reserves Policy Advisor; Julie Nguyen, Graduate Community Policy Advisor
Report Number:	RSPC21-09-6

1 Summary

1.1 This report provides a progress update on implementation of the Tasman Climate Action Plan (Action Plan), along with climate change updates in brief at the regional, national and international level.

1.2 Cabinet has agreed to begin consulting on the national Emissions Reduction Plan in early October and to extend the date for finalising this Plan out to May 2022. Consultation will take place over a six-week period.

1.3 The international update section notes that the latest report from the Intergovernmental Panel on Climate Change was released in August.

2 Draft Resolution

That the Strategy and Policy Committee receives the Climate Change Update report RSPC21-09-6.

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3 Purpose

3.1 This report provides:

- a brief update on the Tasman Climate Action Plan; and
- climate change updates in brief at the regional, national and international level.

4 Background

4.1 The Action Plan was adopted by Council at a Full Council meeting on 12 September 2019 (RCN19-09-11). The Action Plan contains three focus areas and actions under four goals.

4.2 An internal working group, comprising of 12 staff from across Council, meet bimonthly to ensure the Action Plan progresses.

5 Update on progress with implementing the Tasman Climate Action Plan

5.1 The following table highlights progress on some of the projects contained within the Action Plan. A more detailed annual report on implementation of the Action Plan will be presented to the 11 November 2021 Strategy and Policy Committee meeting.

Goal	Target	Action	Status	Progress Update
1. Council contributes to New Zealand's efforts to reduce GHG emissions (incl. net carbon emissions).	1(a) Council's emissions* of methane reduce by 10% below 2017 levels by 2030 and 47% by 2050 or earlier. Council's net emissions* of all other greenhouse gases reduce to zero by 2050.	(iii) Facilitate and support a higher number of strategically located EV charging stations and electric bike docks/charging stations across the District. Continue to increase the number of plug-in hybrid vehicles in Council's fleet and investigate use of electric vehicles.	Progressing	Council's vehicle fleet currently includes seven hybrid cars, but no electric vehicles (EVs) as yet. Staff are assessing options for potential purchase of Council's first EV. The LTP 2021-2031 has no budget for installing EV charging stations at our service centres or elsewhere in the District. Installing a slow charger at our service centres to charge fleet vehicles would cost approximately $5,000. A rapid charger for public use is estimated to cost $30,000. Council was committed to sticking to the debt cap for Tasman's 10-Year Plan, and the initial suggestion to include a generic fund of $35,000/year for electric bike and EV charging stations around the District did not receive enough support. ChargeNet is currently working on rolling out EV charging stations across the highways of Aotearoa at 'road trip gaps'. It is not considering any local road networks at present.

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1. Council contributes to New Zealand's efforts to reduce GHG emissions (incl. net carbon emissions).	1(a) Council's emissions* of methane reduce by 10% below 2017 levels by 2030 and 47% by 2050 or earlier. Council's net emissions* of all other greenhouse gases reduce to zero by 2050.	(vi) Continue to work with communities to plant trees (e.g. riparian margin restoration, habitat enhancement, land stability, planting in Council parks and reserves and within some roading corridors, expand Council nursery production), to sequester carbon.	On track	Over the time period September 2020 to September 2021, Council has planted over 85,000 plants and trees. This includes planting undertaken for the Waimea Inlet Jobs for Nature project, our River Planting Programme, planting undertaken by Reserves and Facilities, Catchment Enhancement Fund plantings, and the Marahau-Otuwhero revegetation project.

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1. Council contributes to New Zealand's efforts to reduce GHG emissions (incl. net carbon emissions).	1(a) Council's emissions* of methane reduce by 10% below 2017 levels by 2030 and 47% by 2050 or earlier. Council's net emissions* of all other greenhouse gases reduce to zero by 2050.	(viii) Investigate energy efficient design and renewable energy options for Council buildings and activities.	On track	The new Motueka Library will have solar photovoltaic and a rainwater capture system. The solar panels have been installed and both systems will be connected this November. The Brightwater Water Treatment Plant has a solar photovoltaic system in place. There are plans to extend this to other water treatment plants and wastewater treatment plants as funding becomes available. Other energy efficient projects currently underway: 1. In six months, we will trial an ultra-high efficiency electric motor at the Brightwater Water Treatment Plan. From an energy efficient perspective, this is important as 60-70% of the electricity used by the Council is related to water or wastewater, and almost all of that is pumping-related. Each pump is powered by an electric motor. If the trial is successful, for above ground pumping, we will likely switch our standard pump motor to one of these ultra-high efficiency motors. 2. We have purchased one power quality meter which has motor analysis capability. This will help us check that our electric motors are running as efficiently as possible.

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Goal	Target	Action	Status	Progress Update
				3. Staff are continuing to work through a prioritised list to reduce electricity used by our wastewater and water treatment plants.

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1. Council contributes to New Zealand's efforts to reduce GHG emissions (incl. net carbon emissions).	1(a) Council's emissions* of methane reduce by 10% below 2017 levels by 2030 and 47% by 2050 or earlier. Council's net emissions* of all other greenhouse gases reduce to zero by 2050.	(ix) Implement the Joint Waste Management and Minimisation Plan (WMMP), to reduce total waste to landfill. This plan includes new options for achieving overall reduction (e.g. promotion of circular economy, education, service changes etc).	Progressing	Staff are working with Nelson City Council (NCC) to divert construction waste from landfill. This work is possible with the Ministry for the Environment's (MfE) Waste Minimisation Fund. The 'Breakfast for Builders' event has been postponed due to the Covid-19 lockdown. The plan is to engage with the sector first before implementing any trials to achieve reduced construction waste to landfill for reuse. This year we have promoted reuseable cups and recycling car seats. We have, and will continue, to promote our composting voucher with an informative video on composting, Love Food Hate Waste content, Second Hand Sunday, FutureFit, and ShareWaste (a compost sharing collective). The most recent Second Hand Sunday had positive engagement, with over 1,500 residents from Nelson and Tasman seeking out information on the event, and over 600 downloads of the list of participating addresses. The most recent Second Hand Sunday had 60 survey participants, with 16 people saying they were made aware of the event via our Facebook page. Once we are at a lower alert level, we plan to promote the event waste grants and the national campaign, RefillNZ.

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Goal	Target	Action	Status	Progress Update
1. Council contributes to New Zealand's efforts to reduce GHG emissions (incl. net carbon emissions).	1(d) Use of transport (e.g. walking, cycling etc) as a form of transportation increases year on year.	(i) Continued investment in new and (maintenance of) existing active transport networks.	On track	During the past quarter no new cycle lanes have been constructed within the District. Staff have recently received direction from councillors, and are developing Council's Draft Walking and Cycling Strategy for consultation with the public. Staff have been working with developers to ensure that more developments are better connected. A good example of this is in Richmond West where we have added in around 7 km of new shared pathways. The Kohatu to Tapawera section of Tasman's Great Taste Trail has recently been completed. There are a few sections of the Trail staff are considering for improvement, but the current state of the Trail does not prevent people from using those sections of the Trail. Staff are working on a detailed design for the Tapawera to West Bank section. This will be the final section, which will complete the loop.

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Goal	Target	Action	Status	Progress Update
2. Tasman District becomes more resilient to the impacts of climate change.	2(b) New coastal development and infrastructure accounts for climate change risks, including sea level rise.	(i) The Coastal Hazard mapping and plan change programme continues to completion; including consideration of the extent of the risks, options and regulatory responses for adaptation, relocation, coastal structures etc.	On track	The Coastal Management Project is in Phase 3 of its work programme. The focus is on how we can respond to sea level rise and coastal hazards by identifying high-level options that enable us to adapt. The options are grouped into four categories – accommodate, protect, avoid, and retreat. Community engagement is being undertaken between 6 September and 15 October and includes updated website pages, publication of a high-level coastal management options report, and three interactive webinars in late September. Feedback is being sought via an online feedback form, virtual feedback board, and hard copy forms. On completion of this engagement, all feedback will be summarised into a report and published on our website. This information will be used to inform next steps in the work programme. This will focus on considering specific options at the local level around Tasman, including respective costs, benefits, and potential adverse effects - and which of these are acceptable.

6 Regional update

Nelson Tasman Climate Forum

6.1 Since the last report, the Nelson Tasman Climate Forum has hired an Activity and a Communication Coordinator. The Forum is currently advertising for a Project and Funding Coordinator. The funds for this new role come from Nelson City Council (NCC).

6.2 We have provided the Forum with $2,000 towards venue hire this year for its monthly hui. The Forum is appreciative of this one-off grant from the Council.

6.3 The Forum is working on becoming more focused and organised:

- the Leadership Group has started developing a process to coordinate climate related submissions to local and central agencies on behalf of the Forum;
- to date, the Leadership Group has finalised six indicators for success for the Forum, including around its internally-focused 'Weaving Plan', and the 'Climate Action Book' for governing bodies, communities, businesses and individuals;
- a new format to the monthly hui is being trialled, with allocated time for updates from any participant at the hui on an area of interest (e.g. art, youth, science etc);
- groups in the Forum are working on 16 active projects, including a repair café, education through workshops and at schools, and letter writing campaigns; and
- work is underway to attract more youth participation. The Forum is engaging with principals and teachers around the region, it is dedicating a 'youth spot' for young people to participate in discussions at the September hui, and organising a Forum event just for young Nelson-Tasman residents.

Nelson City Council

6.4 A draft NCC Climate Action Plan was discussed at a NCC Environment and Climate Committee workshop in July. The draft Plan shows all the resources allocated to climate change projects over the next ten years, as set out in NCC's Long Term Plan 2021-2031. The actions in that draft Plan cover a wide range of infrastructural, social and environmental areas.

6.5 A wastewater heat mapping study has been completed that outlines how much energy is potentially available for recover and reuse heat in various parts of Nelson City.

6.6 NCC is continuing to compile information for its operational carbon footprint emissions inventory. The inventory supports the monitoring of NCC's progress with its greenhouse gases emissions (GHG) reductions.

6.7 NCC is also leading the establishment of a working group to estimate the community GHG emissions based in the Global Protocol for Communities. The group will include members of the Nelson Tasman Climate Forum (from its Science, Technology & Research Group), as well as support from the Nelson Regional Development Agency. NCC staff have invited our Council to participate in this project, to create a community carbon footprint for both the Nelson and Tasman regions.

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7 National update

7.1 The diagram on the following page outlines how the Zero Carbon Framework provides the tools to manage New Zealand's transition to a low-emissions and climate-resilient future. The Climate Change Response Act (2002) was amended in 2019 to include this new legislative framework.

Emissions Reduction Plan

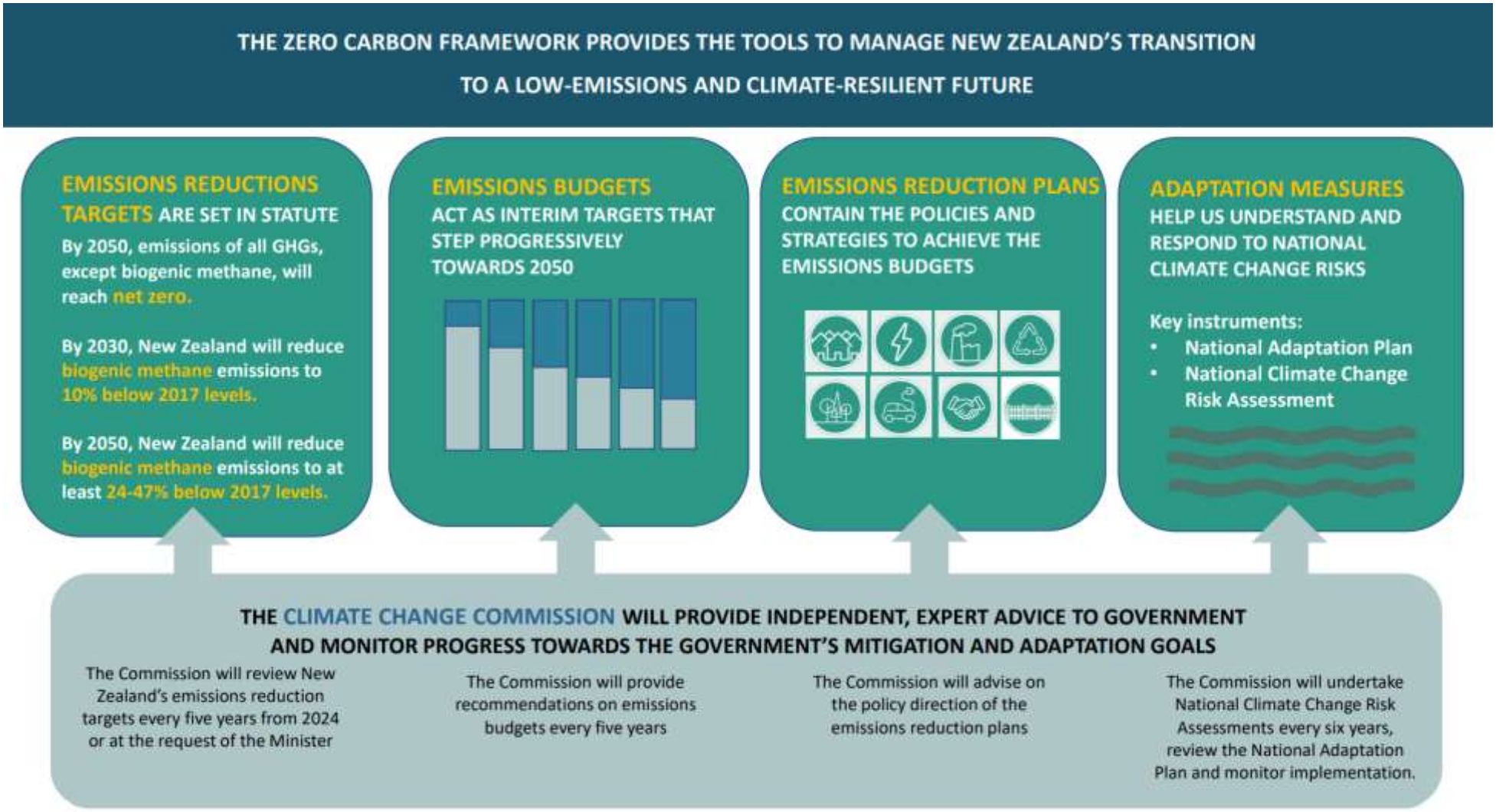
7.2 The Climate Change Response Act 2002 requires the Government to prepare emissions reduction plans setting out how New Zealand will meet emissions budgets, which will act as stepping-stones (or interim targets) towards our 2050 emissions reduction targets.

7.3 Ministry and agency officials are considering the first package of advice to the Government from the Climate Change Commission and are preparing New Zealand's first Emissions Reduction Plan (ERP), which was due to be finalised by the end of 2021. Cabinet has subsequently agreed to begin consulting on the ERP in early October and require that the final plan be released by the end of May next year, in line with the 2022 Budget.

7.4 In a press release dated 15 September, the Minister of Climate Change, James Shaw, explained that "*Cabinet's decision allows organisations and communities key to the Emissions Reduction Plan's success to focus on getting through the worst of the COVID outbreak before engaging with the plan. The plan will be developed with input from iwi/Māori, Pacific communities, business, NGOs, local government, and communities all over the country. Notifying them now of our timeline for consultation gives them time to prepare the resources they need to engage fully. It is only right to make sure everyone has the chance to contribute without the additional challenge of keeping people safe while the country is at different alert levels, especially those in Auckland who are still at level 4. It also allows the Government to align the final plan with Budget 2022, so people can see how its delivery will be supported through Government investment*."

7.5 The press release also included the following information:

- Since the final advice of the independent Climate Change Commission was published in June, conversations have been underway across Government about how Ministers and agencies can support emissions reductions in their portfolios - and what can be included in the final ERP.
- There is still work to do to make sure New Zealand is able to meet its emissions budgets and the Government wants to hear people's ideas so they can inform the conversations that continue across Government. The six-week consultation will also invite feedback on the role different sectors can play in meeting the emissions budgets - and what they need from the Government to support change in their own area.
- While the Government has an important role to play in getting the policy and regulatory settings right, it cannot do so alone. Building a low-emissions economy is a collective effort. It is true to say that some of the necessary changes can only be


THE ZERO CARBON FRAMEWORK PROVIDES THE TOOLS TO MANAGE NEW ZEALAND'S TRANSITION
TO A LOW-EMISSIONS AND CLIMATE-RESILIENT FUTURE
EMISSIONS REDUCTIONS TARGETS ARE SET IN STATUTE
By 2050, emissions of all GHGs, except biogenic methane, will reach net zero.
By 2030, New Zealand will reduce biogenic methane emissions to 10% below 2017 levels.
By 2050, New Zealand will reduce biogenic methane emissions to at least 24-47% below 2017 levels.
EMISSIONS BUDGETS
ACT AS INTERIM TARGETS THAT STEP PROGRESSIVELY TOWARDS 2050
EMISSIONS REDUCTION PLANS
CONTAIN THE POLICIES AND STRATEGIES TO ACHIEVE THE EMISSIONS BUDGETS
ADAPTATION MEASURES
HELP US UNDERSTAND AND RESPOND TO NATIONAL CLIMATE CHANGE RISKS
Key instruments:
• National Adaptation Plan
• National Climate Change Risk Assessment
THE CLIMATE CHANGE COMMISSION WILL PROVIDE INDEPENDENT, EXPERT ADVICE TO GOVERNMENT AND MONITOR PROGRESS TOWARDS THE GOVERNMENT'S MITIGATION AND ADAPTATION GOALS
The Commission will review New Zealand's emissions reduction targets every five years from 2024 or at the request of the Minister
The Commission will provide recommendations on emissions budgets every five years
The Commission will advise on the policy direction of the emissions reduction plans
The Commission will undertake National Climate Change Risk Assessments every six years, review the National Adaptation Plan and monitor implementation.

- made if they are supported by policy or regulatory change. But that is not always the case. The final emissions reduction plan will need to reflect this. The end of May deadline for the final ERP will require a legislative change.

7.6 The final ERP will set out the policies and strategies New Zealand will take to meet the country's first emissions budget. It will aim to reduce emissions and outline ways to mitigate the impacts that reducing emissions will have on people, along with targeted policies for specific sectors (transport, building and construction, agriculture and forestry, waste, and energy). It will also set direction for how future emissions budgets will be met.

National climate change risk assessment for New Zealand

7.7 In August 2020, MfE published the first national climate change risk assessment for New Zealand. This risk assessment, a requirement of the Climate Change Response Act 2002, provides an overview of the most urgent climate change risks for New Zealand. It helps the Government identify where it needs to prioritise action and is an important step towards making New Zealand more resilient. The risk assessment:

- gives the first national picture of the risks New Zealand faces from climate change;
- identifies 43 priority risks covering all aspects of life from our ecosystems and communities to buildings and the financial system;
- groups risks according to five value domains: natural environment, human, economy, built environment, and governance;
- identifies the 10 most significant risks that require urgent action in the next six years to reduce their impacts; and
- lays the foundation for a national adaptation plan which will outline the Government's response to these risks.

7.8 The next steps for the Government is to prepare, consult on and adopt a National Adaptation Plan by August 2022 that will outline what New Zealand needs to do to respond to the risks. The Climate Change Commission will monitor its implementation and report to the MfE every two years on its effectiveness.

Local climate change risk assessment framework

7.9 MfE has been working with Tonkin and Taylor and representatives from local government and iwi/Māori to develop a framework for regional and local risk assessments. The framework establishes a foundation for consistency across local risk assessments while providing flexibility to allow the inclusion of local values when carrying out an assessment. MfE intended to publish the guidance on their website in early September.

7.10 MfE is working with LGNZ, Taituarā and Tonkin and Taylor on a rollout programme to support the uptake and implementation of the guidance and gather feedback from local authorities.

7.11 Staff anticipate that preparation of a local climate change risk assessment for Tasman District will be a substantial piece of work, requiring additional resourcing. While we have an understanding of vulnerability to low-lying coastal areas in relation to coastal storm inundation and sea level rise, other climate-related risks are less well understood. These risks can be categorised into 'value domains' and include human, economy, built environment, governance and natural environment. Many other councils are more advanced than us in their work on climate change risk assessments.

National Adaptation Plan – Council preparedness for climate change impacts

7.12 Last year, Council responded to MfE's online survey on how reporting organisations (central government, local government, lifeline utilities, council-controlled organisations and state services) are preparing for the impacts of climate change. Our responses will help to shape actions the Government will take to support organisations to keep their essential services going in the face of a changing climate.

7.13 MfE recently released a report on this survey: '*Adaptation Preparedness: 2020/21 baseline – A summary of reporting organisation responses to the first information request under the Climate Change Response Act 2002*'. This report will form part of the evidence underpinning the development of New Zealand's first National Adaptation Plan. You can read MfE's report here: https://environment.govt.nz/publications/adaptation-preparedness-202021-baseline/. It highlights concerns and risks to assets, ecosystems, communities, tools and funding support, and education for decision makers and the wider community.

7.14 The information gathered from the survey shows where MfE can direct more support to organisations in their planning. Responses also set a baseline from which the Climate Change Commission and MfE can measure how prepared local government and others are to address the impacts of climate change and the effectiveness of the actions in the Plan.

Consultation on two areas of the emissions trading scheme

7.15 The Government recently consulted on options for improving the New Zealand Emissions Trading Scheme (NZ ETS), which closed earlier this month. The consultations proposed further refinements to the NZ ETS to ensure a fair and efficient market. One proposed improvement is to the market governance framework of the NZ ETS, and the other improvement is reviewing industrial allocation: the provision of free emissions units to industries considered emissions-intensive and trade-exposed. Council did not make a submission on either proposal.

Climate change litigation against local government

7.16 Past New Zealand High Court cases such as *Smith v Fonterra Co-Operative Group* and *Hauraki Coromandel Climate Change Action Inc v Thames-Coromandel District Council* highlight the increased risk of climate change litigation being brought against local government. The Lawyers for Climate Action New Zealand Incorporated (LCANZI) has recently filed judicial proceedings against the Climate Change Commission (the Commission) and the Minister for Climate Change, Hon James Shaw. LCANZI claim that the Commission's final advice to the Government was unreasonable and inconsistent with the purpose of the Climate Change Response Act 2002. Closer to home, LCANZI has written and expressed concern to Nelson City Council about the legality of the decision to develop a new library on a site near the Maitai River: https://www.stuff.co.nz/environment/climate-news/300389491/legal-concerns-raised-with-nelson-council-over-library-development

8 International updates of interest

Key messages from the latest IPCC report

8.1 The AR6 Climate Change 2021 - Sixth Assessment Report from the Intergovernmental Panel on Climate Change (IPCC), released on 9 August 2021, brings together years of research from climate scientists from around the world. The UN climate change body (IPCC) was created to provide regular scientific assessments on climate change, its implications and potential future risks, as well as to put forward adaptation and mitigation

options. An overview of this report and implications for New Zealand was included in the Environment and Planning Manager's report to the Regulatory Committee meeting held on 9 September 2021 (RRC2021-09-04).

8.2 The report's 'Summary for Policymakers' provides a high-level summary of the understanding of the current state of the climate, including how it is changing and the role of human influence, and the state of knowledge about possible climate futures, climate information relevant to regions and sectors, and limiting human-induced climate change. Headline statements from the summary are appended as Attachment 1.

8.3 Additional materials and information about the report are available at: https://www.ipcc.ch/report/ar6/wg1/ and the *Regional fact sheet: Australasia* is available at: https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Australasia.pdf.

9 Conclusion/next steps

9.1 We will present a detailed annual report on progress with implementing the Tasman Climate Action Plan to the 11 November Strategy and Policy Committee meeting.

9.2 During September, MfE is due to provide guidance to councils on how to prepare local climate change risk assessments. Once the guidance is received, staff will scope the work programme requirements and seek direction from the Leadership Team on how to resource this project.

9.3 Work is underway by the Government to produce an Emissions Reduction Plan and National Adaptation Plan. These will provide national guidance on actions to help us contribute to limiting the increase in average global temperature to 1.5°C above pre-industrial levels and adapt to climate change impacts.

9.4 The latest IPCC report from the world's scientists reiterates that climate change is human induced and warns us that time is rapidly running out to limit warming to recommended levels.

Attachments

1. ⇩ Summary for Policymakers - IPCC AR6 224

Headline Statements from the Summary for Policymakers (IPCC AR6)

The Current State of the Climate

It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred.

The scale of recent changes across the climate system as a whole and the present state of many aspects of the climate system are unprecedented over many centuries to many thousands of years.

Human-induced climate change is already affecting many weather and climate extremes in every region across the globe. Evidence of observed changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones, and, in particular, their attribution to human influence, has strengthened since the Fifth Assessment Report (AR5).

Improved knowledge of climate processes, paleoclimate evidence and the response of the climate system to increasing radiative forcing gives a best estimate of equilibrium climate sensitivity of 3°C, with a narrower range compared to AR5.

Possible Climate Futures

Global surface temperature will continue to increase until at least the mid-century under all emissions scenarios considered. Global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in carbon dioxide (CO_2) and other greenhouse gas emissions occur in the coming decades.

Many changes in the climate system become larger in direct relation to increasing global warming. They include increases in the frequency and intensity of hot extremes, marine heatwaves, and heavy precipitation, agricultural and ecological droughts in some regions, and proportion of intense tropical cyclones, as well as reductions in Arctic sea ice, snow cover and permafrost.

Continued global warming is projected to further intensify the global water cycle, including its variability, global monsoon precipitation and the severity of wet and dry events.

Under scenarios with increasing CO_2 emissions, the ocean and land carbon sinks are projected to be less effective at slowing the accumulation of CO_2 in the atmosphere.

Many changes due to past and future greenhouse gas emissions are irreversible for centuries to millennia, especially changes in the ocean, ice sheets and global sea level.

Climate Information for Risk Assessment and Regional Adaptation

Natural drivers and internal variability will modulate human-caused changes, especially at regional scales and in the near term, with little effect on centennial global warming. These modulations are important to consider in planning for the full range of possible changes.

With further global warming, every region is projected to increasingly experience concurrent and multiple changes in climatic impact-drivers. Changes in several climatic impact-drivers would be more widespread at 2°C compared to 1.5°C global warming and even more widespread and/or pronounced for higher warming levels.

Low-likelihood outcomes, such as ice sheet collapse, abrupt ocean circulation changes, some compound extreme events and warming substantially larger than the assessed very likely range of future warming cannot be ruled out and are part of risk assessment.

Limiting Future Climate Change

From a physical science perspective, limiting human-induced global warming to a specific level requires limiting cumulative CO_2 emissions, reaching at least net zero CO_2 emissions, along with strong reductions in other greenhouse gas emissions. Strong, rapid and sustained reductions in CH_4 emissions would also limit the warming effect resulting from declining aerosol pollution and would improve air quality.

Scenarios with low or very low greenhouse gas (GHG) emissions (SSP1-1.9 and SSP1-2.6) lead within years to discernible effects on greenhouse gas and aerosol concentrations, and air quality, relative to high and very high GHG emissions scenarios (SSP3-7.0 or SSP5-8.5). Under these contrasting scenarios, discernible differences in trends of global surface temperature would begin to emerge from natural variability within around 20 years, and over longer time periods for many other climatic impact-drivers (*high confidence*).