**Aotearoa New Zealand’s input for the Special Rapporteur on housing – report on climate change**

Te Tūāpapa Kura Kāinga – the Ministry of Housing and Urban Development (the Ministry) have chosen to respond to questions one, eight and eleven as these best allowed the Ministry to summarise New Zealand’s work on climate change and the right to adequate housing.

***Question 1: In your country, what have been the main effects of the climate crisis, on the enjoyment of the right to adequate housing? Please specify whether there have been any climate-induced impacts on the security of tenure, availability, affordability, accessibility, habitability, location and cultural adequacy of housing, including climate crisis related displacement.***

Many homes, buildings, and places in Aotearoa New Zealand are already at risk from natural hazards and we can expect these risks to grow in frequency and severity due to the changing climate. Sea level rise will threaten our coastal communities and raise groundwater. Extreme weather events will be stronger and increase the risk of flooding, erosion and landslides. Higher temperatures may cause heat stress, lead to increasingly dangerous forest and bush fires, and prolong and worsen droughts. These changes will impact infrastructure as well as the physical and social wellbeing of communities.

About 675,000 people across New Zealand live in areas that are prone to flooding, which amounts to over $100 billion worth of residential buildings.[[1]](#footnote-0) Over 72,000 people in New Zealand live in areas at risk of storm surges.[[2]](#footnote-1) Insurance claims for extreme weather events in New Zealand hit a record $321.6 million in 2021, breaking the record last set in 2020 at $274 million.[[3]](#footnote-2)

Damage to existing housing stock from climate change could have knock-on effects for the country’s housing supply. It could further reduce the supply and affordability of housing, weaken social cohesion and prevent communities from growing. It could also reduce access to good quality housing for tenants, individuals and families experiencing, or at risk of, homelessness.

Engagement with flood-affected communities has highlighted immense and lasting mental and social impacts from flooding, concern about insurance withdrawal, concern about the potential need for managed retreat and that this could have major impacts on cultural and social wellbeing.

Currently there are few examples of homes being unable to get insurance. All homes who lost cover with recent or repeated flooding events managed to find insurance with different providers. However, several homes chose not to insure, and many are only insured for market value (rather than replacement). The market value of many homes would be significantly insufficient to fund a rebuild or moving elsewhere. Affordability of insurance is becoming an issue for some property owners.

*Westport Case Study*

Westport is a community of 4,600 people on the West Coast of the South Island of New Zealand. The community is facing significant challenges in adapting to the effects of flooding and climate change. Severe floods in July 2021 and February 2022 caused widespread damage to homes and infrastructure, and the Buller District Council required central-government funding to help with the recovery.

The July 2021 event was the largest direct measurement of a river flow ever recorded in Aotearoa New Zealand. The flow breached Westport’s flood defences, with 826 properties and over 2,000 people requiring evacuation. Three separate civil defence welfare centres were established to support displaced people in need of emergency accommodation. A total of 563 houses were damaged (with 71 homes deemed unsafe for ongoing occupation) representing 23% of the town’s housing stock. It made it necessary to develop an area for temporary housing for those who could not return to their homes.

Modelling suggests the Westport community is at high risk of more floods – with climate change expected to increase the frequency and severity. Repeated flooding has heightened community concerns about reducing the risk and protecting assets and livelihoods.

A number of risk reduction initiatives are underway locally. The West Coast Regional Council and Buller District Council have developed a business case for flood protection and resilience initiatives, which involve actions across the protect – accommodate – avoid – retreat spectrum. The combined district plan (Te Tai o Poutini Plan) proposes rezoning land to residential in less flood-prone areas together with minimum floor heights; and a local-level climate risk assessment and climate adaptation plan for the Buller District has been initiated.

However, local ability to fund adaptation and flood protection is likely to be a challenge, as many among the population have very low incomes, as measured by the socio-economic deprivation index. Meeting these costs may be beyond the financial capacity of the ratepayers and councils.

Central government (through the Department of Internal Affairs (DIA) and the National Emergency Management Agency (NEMA)) is partnering with local councils and iwi (Māori tribes) to explore new funding and financing models for co-investing in flood risk reduction and climate adaptation for the Westport community. This work includes looking at how costs could be more equitably shared between central and local government, and between the community, private sector and other asset owners.

***Question 8: Please explain how energy efficiency, green urban planning, climate mitigation and adaptation policies and programmes take into account the right to adequate housing. What measures have been taken to ensure that they do have any (unintended) discriminatory impacts on particular groups?***

Aotearoa New Zealand’s climate change response is guided by the Climate Change Response Act (CCRA). This Act provides a legal framework to enable New Zealand to meet its international obligations under the United Nations Framework Convention on Climate Change, the Kyoto Protocol and the Paris Agreement. An amendment to the act in 2019 made the following changes:

* set a new domestic greenhouse gas emissions reduction target for New Zealand to:
	+ reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050
	+ reduce emissions of biogenic methane to 24–47 per cent below 2017 levels by 2050, including to 10 per cent below 2017 levels by 2030
* established a system of emissions budgets to act as stepping stones towards the long-term target
* required the Government to develop and implement policies for climate change adaptation and mitigation
* established a new, independent Climate Change Commission to provide expert advice and monitoring to help keep successive governments on track to meeting long-term goals.

New Zealand’s key policy documents related to climate mitigation and adaptation under the CCRA are:

* Emissions Reduction Plan
* National Adaptation Plan

Broader policy settings and direction related to housing and urban development are set out in the:

* Government Policy Statement – Housing and Urban Development
* MAIHI Ka Ora – the Māori Housing Strategy
* National Policy Statement – Urban Development

| **Policy Document** | **How right to adequate housing is taken into account** | **Measures to ensure no discriminatory impacts** |  |
| --- | --- | --- | --- |
| [Emissions Reduction Plan](https://environment.govt.nz/publications/aotearoa-new-zealands-first-emissions-reduction-plan/) (ERP)New Zealand’s first ERP was released in May 2022. It sets the direction for climate action for the next 15 years and lays out the targets and actions New Zealand will take to meet those targets. There are over 300 actions across 16 chapters in the ERP. Chapters relevant to housing include: Planning & Infrastructure; Building & Construction; and Energy.  | The ERP contains policy direction that, to reduce emissions, we need more energy-efficient, mixed-use urban development at medium and high densities, supported by active and public transport, ie it promotes improvements to housing supply and quality, and improvements to urban development to reduce emissions.  | The ERP includes a chapter on Equitable Transition, setting out policies for how we will transition to a low carbon future in ways that re just, fair and inclusive for all New Zealanders. This includes actions for how workers, whānau (families), households, business and industry, Māori, Pasifika, regional communities and economies, disabled people and wider communities are supported through this period of change.  |  |
| National Adaptation PlanNew Zealand’s first national adaptation plan (NAP) will be published on 3 August 2022. It will set out the policies, strategies and proposals for meeting the Government’s climate adaptation objectives. The NAP will set out the Government’s strategic pathway to building New Zealand’s resilience to the impacts of climate change over the next 6 years (until a new plan is produced).  | As climate change could have knock-on effects for New Zealand’s housing supply, this first NAP will include actions that aim to improve the climate resilience of homes, buildings and places. The NAP will include approximately 12 actions to broadly support the housing system to be resilient to climate change. These actions will help ensure New Zealanders are able to continue to live in warm, dry and safe homes that meet their social and cultural needs.  | The actions in the NAP aim to ensure we can support New Zealanders to continue to enjoy healthy, safe and well-functioning places to live, work and come together as a community. This means focusing on supporting already vulnerable communities, such as public and community housing tenants. Actions will also ensure we do not lock in or exacerbate future impacts on communities, such as accessibility issues, and that we manage potential impacts of regulatory change. |  |
| [Government Policy Statement – Housing and Urban Development](https://www.hud.govt.nz/urban-development/government-policy-statement-gps/) (GPS-HUD)The GPS-HUD is required under the Kāinga Ora Act, and must set out the Government’s direction and priorities for housing and urban development.  | The GPS-HUD focuses on increasing the supply of housing, improving access to housing, improving the quality of housing and reducing inequity in housing across our communities and places. This approach is broadly in line with the concept of the right to a decent home. The GPS-HUD is attached to this response as an annex. | The GPS-HUD’s vision is that “Everyone in Aotearoa New Zealand lives in a home and within a community that meets their needs and aspirations.” It includes policies to improve accessibility, ensuring that places we live reflect our culture and heritage, and ensuring that houses are available that meet the needs of diverse households. It sets policy direction that Māori and the Crown are working together in partnership to ensure all whanau have safe, healthy, affordable homes with secure tenure. The GPS-HUD also sits alongside MAIHI Ka Ora, which is the Government’s strategy to address poor Māori housing outcomes. |  |
| [MAIHI Ka Ora](https://www.hud.govt.nz/maihi-and-maori-housing/maihi-ka-ora-the-national-maori-housing-strategy/) (the National Māori Housing Strategy)This strategy has a shared vision for the Māori housing system that all whanau (families) have safe, healthy, affordable homes with secure tenure, across the Māori housing continuum. MAIHI Ka Ora has been developed in partnership with Māori, focusing on our shared priorities and how both Māori and the Crown intend to address them.  | This strategy is focussed on breaking down the problems facing Māori housing, actions to solve those problems, and timeframes to make sure we improve housing outcomes and wellbeing for Māori. While it is not a climate change policy, it includes a focus on Māori housing sustainability and enabling Māori to sustain a connection to their own land through housing, which is innovative and responsive to the effects of climate change.  | This strategy is focused on addressing poor housing outcomes experienced by Māori in Aotearoa New Zealand. These poor outcomes include poor quality of Māori housing, lack of new housing supply, unaffordability for Māori to rent or own their own home. The strategy is an expression of the articles of the Treaty of Waitangi, and it outlines a Māori Crown partnership that will look to make changes to improve Māori housing outcomes over the next 30 years.  |  |
| [National Policy Statement – Urban Development](https://environment.govt.nz/acts-and-regulations/national-policy-statements/national-policy-statement-urban-development/) (NPS-UD)The NPS-UD is a regulation under the Resource Management Act, which is Aotearoa New Zealand’s planning legislation. The NPS-UD provides national direction to local authorities to plan well for growth and ensure a well-functioning urban environment for all people, communities and future generations. | The NPS-UD is about ensuring New Zealand’s towns and cities are well-functioning urban environments that meet the changing needs of our diverse communities. It removes overly restrictive barriers to development to allow growth ‘up’ and ‘out’ in locations that have good access to existing services, public transport networks and infrastructure. Greater housing supply will help to ensure everyone is able to enjoy their right to adequate housing.  | Under the NPS-UD, councils are directed to give greater consideration to ensuring that cities work for all people and communities. Particular focus is given to access, climate change and housing affordability. The Resource Management Act (under which this regulation sits) includes broader provisions to allow community participation in planning decisions, and requirements to take into account the Treaty of Waitangi.  |  |

***Question 11: How does the housing sector in rural and urban areas contribute to climate change? It may be helpful to think in terms of:***

* ***Energy consumption for heating, cooling, cooking, lighting of housing;***
* ***Urban sprawl and related climate impacts (soil sealing, commuter traffic etc);***
* ***Increase of average per capita living space;***
* ***Water use***
* ***Emission of pollutants***
* ***Climate impact of construction and used construction materials;***
* ***Deforestation, desertification and loss of biodiversity caused by housing development projects***

New Zealand’s GHG inventory indicates that agriculture and transport make up the largest proportion of New Zealand’s emissions, with forestry being the largest sequester of carbon. Accordingly, these areas have been prioritised by policymakers as key sectors where government intervention is needed to reduce GHG emissions.

While emissions are not consistently aggregated spatially in New Zealand, around 70% of New Zealanders live in an urban area with a population greater than 30,000 and as a result, much of the country’s energy use, building and construction, and transport-generated emissions occur within urban areas. Additionally, cities are also responsible for a lot of waste that is sent directly to landfill, due to the scale of their populations.

The main sources of emissions that we have considered linked to housing are direct emissions from energy use to operate dwellings, embodied emissions in buildings and dwellings, transport emissions which are impacted by decisions about the location, nature and density other characteristics of urban areas and housing; emissions from operating other infrastructure such as water and wastewater networks, and embodied emissions in infrastructure.

**Planning and urban form**

Over many decades, our towns and cities have been planned in ways that often lead to businesses, communities and households participating in activities that create emissions and make it harder for them avoid or reduce emissions. Many major infrastructure decisions have not adequately taken climate change into account.

In particular, dispersed low-density urban development has led to very high transport emissions per capita. Transport is one of our largest sources of greenhouse gas emissions and is responsible for 39 per cent of Aotearoa New Zealand’s domestic carbon emissions. Evidence demonstrates that as urban density increases, private vehicle energy use tends to decrease as well as associated transport emissions.[[4]](#footnote-3)

OECD modelling in Auckland in 2019 found that policies such as increasing the cost of car use and subsidising public transport or electric vehicles will likely reduce emissions. It also found that land use policies which intensify development can support these policies by further decreasing emissions by around 10% in several of the scenarios modelled. It concluded that land use intensification policies can be powerful tools, not only for decarbonising urban mobility but also for improving welfare in other ways, such as by slowing down growth in housing prices.[[5]](#footnote-4)

In our urban areas – where most people live – planning that supports low-emissions urban form through more mixed-use, medium- and high-density development close to urban centres creates more accessible, healthy, resilient and vibrant towns and cities. In rural areas, planning can support interregional connections for people and freight. In urban and rural areas, infrastructure investment and planning can help make lower-emissions transport an easy, affordable, reliable option for people and freight.

The planning system can promote developments with higher-density buildings, including apartments and townhouses. This type of development can have lower construction and operational emissions than standalone dwellings. We can better provide more efficient and low-emissions infrastructure services to communities and businesses when infrastructure is integrated with development.

The planning system and infrastructure investment can also support the use of nature-based solutions or blue/green infrastructure – such as water-sensitive urban design, rain gardens and urban trees – which may support carbon removals and improve climate resilience.

New Zealand’s planning system is currently being reformed. The objectives of these legislative reforms are:

* protect and restore the environment and its capacity to provide for the wellbeing of present and future generations
* better enable development within natural environmental limits
* give proper recognition to the principles of Te Tiriti of Waitangi (the Treaty of Waitangi) and provide greater recognition of te ao Māori (the Māori worldview) including mātauranga Māori (traditional Māori knowledge)
* better prepare for adapting to climate change and risks from natural hazards, and better mitigate emissions contributing to climate change
* improve system efficiency and effectiveness, and reduce complexity while retaining appropriate local democratic input.

**Building and construction, energy and water use**

As set out in New Zealand’s Emissions Reduction Plan, the building and construction sector was responsible for 7.4 Mt CO2-e of emissions in 2018. This represents 9.4 per cent of domestic greenhouse gas (GHG) emissions, or over 15 per cent of emissions if biogenic methane is excluded (see figure below).

In addition, the building and construction sector was responsible for 2.9 Mt CO2-e of emissions that occurred outside Aotearoa, largely from the production of imported construction materials and products. These are not included in domestic emissions budgets for Aotearoa but are a significant proportion of the sector’s total emissions.

Note these figures are based on taking a consumption approach to emissions accounting rather than a production approach.

Emissions directly from buildings, such as fossil fuels used for space and water heating, are only one part of the emissions for which buildings are responsible. Buildings also drive emissions that are accounted for in the energy, industry, waste and transport sectors.

Aotearoa’s approach to understanding building-related emissions includes:

* Operational carbon emissions – from the energy and other resources used for operating the building.
* Embodied carbon emissions – from the manufacture and use of the materials and products in buildings across their lifespan, from construction to deconstruction. These include emissions from the production, transportation and disposal of building materials.

**Figure 1: Building- and construction-related emissions as a proportion of Aotearoa New Zealand’s gross greenhouse gas emissions (excluding biogenic methane) in 2018[[6]](#footnote-5) [[7]](#footnote-6)**



Buildings and houses are long lived, and the amount of energy used to heat, cool, light and maintain them is affected by their original design and construction. Designing, building, using and deconstructing our buildings more efficiently will provide more opportunities to reduce emissions across many sectors. Designing buildings to reduce water consumption and to enable water storage and re-use can also help to reduce the emissions associated with water and wastewater services.

For further information see:

* Building Research Association of New Zealand (BRANZ) (2020) *Climate Change, Net Zero Carbon and the Building Industry* Bulletin 651
* Ministry for Business, Innovation and Employment website - [Building for climate change | Building Performance](https://www.building.govt.nz/getting-started/building-for-climate-change/)
* Ministry for the Environment (2022) *Te hau mārohi ki anamata: Towards a productive, sustainable and inclusive economy Aotearoa New Zealand’s First Emissions Reduction Plan*. Available from <https://environment.govt.nz/publications/aotearoa-new-zealands-first-emissions-reduction-plan/>
* Thinkstep (2018) The carbon footprint of New Zealand’s built environment: hotspot or not? <https://www.nzgbc.org.nz/Attachment?Action=Download&Attachment_id=2635>
* Thinkstep (2019) Under construction: Hidden emissions and untapped potential of buildings for New Zealand’s 2050 zero carbon goal. <https://www.thinkstep-anz.com/resrc/reports/hidden-emissions-and-untapped-potential-of-buildings-for-new-zealands-2050-zero-carbon-goal/>

**Additional resources**

Boston J, and Lawrence J. 2017. The case for new climate change adaptation funding instruments. Wellington: Institute for Governance and Policy Studies.

Boston J, and Lawrence J. 2018. Funding Climate Change Adaptation the case for a new policy framework. Policy Quarterly. 14:40-49.

Climate Change Adaptation Technical Working Group (CCATWG). (2018). *Adapting to a Climate Change in New Zealand: Recommendations from the Climate Change Adaptation Technical Working Group.* (Wellington: Climate Change Adaptation Technical Working Group).

Hanna C, White I, Glavovic B. 2017. Managed retreat in New Zealand: revealing the terminology. Hamilton (NZ): University of Waikato. 27 p. Report for the National Science Challenge: Resilience to Natures Challenges.

Hanna, C., White, I., Glavovic, B. (2018). *Managed retreat governance: Insights from Matatā, New Zealand*. Report for the National Science Challenge: Resilience to Nature’s Challenges, University of Waikato, New Zealand.

Harker J. 2016. Housing built upon sand: advancing managed retreat in New Zealand. *Australian Journal of Environmental Law*. 3:66–85.

Lawrence J, Bell R, Blackett P, Stephens S, Allan S. 2018. National guidance for adapting to coastal hazards and sea-level rise: Anticipating change, when and how to change pathway. Environmental Science & Policy. 82:100–107. doi:10.1016/j.envsci.2018.01.012.

Local Government New Zealand. 2020. Community engagement on climate change adaptation.

Ministry for the Environment. 2020. *National Climate Change Risk Assessment for Aotearoa New Zealand: Main report – Arotakenga Tūraru mō te Huringa Āhuarangi o Āotearoa*: *Pūrongo whakatōpū*. Wellington: Ministry for the Environment

NIWA. (2015). *The effect of sea-level rise on the frequency of extreme sea levels in New Zealand*, and *National and regional risk-exposure in low-lying coastal areas: Areal extent, population, buildings and infrastructure*.

NIWA. (2018): *Estimating financial costs of climate change in New Zealand: An estimate of climate change-related weather event costs.* Dave Frame, Suzanne Rosier, Trevor Carey-Smith, Luke Harrington, Sam Dean, Ilan Noy

New Zealand Climate Change Research Institute and NIWA. (2018) *Estimating financial costs of climate change in New Zealand*

Noble, I.R., S. Huq, Y.A. Anokhin, J. Carmin, D. Goudou, F.P. Lansigan, B. Osman-Elasha, and A. Villamizar. (2014): *Adaptation needs and options*. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D.

Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L.White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 833-868.

Parliamentary Commissioner for the Environment (2015). *Preparing New Zealand for rising seas: Certainty and Uncertainty.* (Wellington, Parliamentary Commissioner for the Environment).

Reisinger A, Lawrence J, Hart G, Chapman R. 2015. From coping to resilience: the role of managed retreat in highly developed coastal regions. In:Glavovic B, Kaye R, Kelly M, Travers A, editors. *Climate change and the coast: building resilient communities*. Boca Raton (FL): CRC Press. p. 285–310.

Stephenson, J., & Orchiston, C. (2018). Communities and Climate Change” Vulnerability to rising seas and more frequent flooding (Commissioned Report for External Body). Motu Economic and Public Policy Research

Storey, B., Owen, S., Noy, I. & Zammit, C. (2020). *Insurance Retreat: Sea level rise and the withdrawal of residential insurance in Aotearoa New Zealand*. Report for the Deep South National Science Challenge, December 2020.

1. https://deepsouthchallenge.co.nz/wp-content/uploads/2021/01/Exposure-to-River-Flooding-Final-Report.pdf [↑](#footnote-ref-0)
2. https://deepsouthchallenge.co.nz/wp-content/uploads/2021/01/Exposure-to-Coastal-Flooding-Final-Report.pdf [↑](#footnote-ref-1)
3. Insurance Council of New Zealand. 2021. Record insurance support for communities – 2021 extreme weather claims exceed $300 M. Retrieved from https://www.icnz.org.nz/media-resources/media-releases/single/item/record-insurance-support-for-communities-2021-extreme-weather-claims-exceed-300-m (4 April 2022). [↑](#footnote-ref-2)
4. See for example Litman , T (2020), Land Use Impacts on Transport - How Land Use Factors Affect Travel Behavior, Victoria Transport Policy Institute; International Energy Agency (IEA); Gouldson, A, Sudmant, A, Khreis, H, and Papargyropoulou, E (2018), The Economic and Social Benefits of Low-Carbon

Cities: A Systematic Review of the Evidence. Coalition for Urban Transitions. London and Washington, DC; Xiao Zhao, Anjali Mahendra, Nick Godfrey, Holger Dalkmann, Philipp (2016),Unlocking the Power of Urban Transport Systems for Better Growth and a Better Climate. The Global Commission on the Economy and Climate. [↑](#footnote-ref-3)
5. OECD (2019) Decarbonising urban mobility with land use and transport policies: The case of Auckland [↑](#footnote-ref-4)
6. Ministry for the Environment (2022) *Te hau mārohi ki anamata: Towards a productive, sustainable and inclusive economy Aotearoa New Zealand’s First Emissions Reduction Plan*. Available from https://environment.govt.nz/publications/aotearoa-new-zealands-first-emissions-reduction-plan/ [↑](#footnote-ref-5)
7. Figures in AR4 terms, based on the New Zealand's Greenhouse Gas Inventory 1990-2018 published in 2020 as opposed to the most recent inventory published 2022. [↑](#footnote-ref-6)