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Climate Change Commission Secretariat  
Level 21, 1 Willis Street  
Wellington 6011  
PO Box 24448  
Wellington 6142

[hello@climatecommission.govt.nz](mailto:hello@climatecommission.govt.nz)

### **Christchurch City Council submission on the Climate Change Commission's 2021 Draft Advice for Consultation**

Christchurch City Council (the Council) thanks the Climate Change Commission for the opportunity to provide comment on the 2021 Draft Advice for Consultation on reducing Aotearoa New Zealand's greenhouse gas emissions.

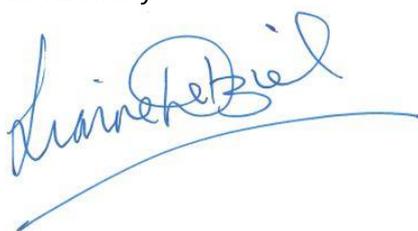
The Council commends the Commission for the draft report and the detailed analysis work done to prepare it. The Council supports the Climate Commission in this work and the intent of this set of draft recommendations to central government – to reduce New Zealand's emissions and join global efforts to avoid the worst impacts of climate change. We appreciate the importance of having an independent body providing politically neutral advice to central government.

Our Council endorsed feedback is framed around each question posed by the Climate Commission in their consultation document.

Because of the large number of recommendations at various levels, it may be useful for the Commission to prioritise and summarise the key actions they would like the government to undertake in its final advice to the government. This would help the public hold the government accountable for future decisions.

For any clarification on points within this submission please contact Carey Graydon, Senior Policy Analyst at [Carey.Graydon@ccc.govt.nz](mailto:Carey.Graydon@ccc.govt.nz).

Yours faithfully



*Lianne Dalziel*  
**Mayor of Christchurch**

## Submission

The Council supports the submissions made the Canterbury Mayoral Forum and LGNZ.

### The Council would like to make the following submissions on specific recommendations in the report:

**Your one big thing:** We believe that as a relatively wealthy country that values the natural environment and our people's wellbeing, New Zealand should show leadership in global efforts to reduce greenhouse gas emissions. New Zealand has one of the highest rates of per capita emissions in the world, so we need to make deeper and earlier emission reductions than other less developed nations to do our fair share.

We recommend that the Commission should be more ambitious in setting its emissions budgets to set a bolder direction for New Zealand's climate action.

### Our six big issues

#### Our six big issues - the pace of change

**Big issues question 1. Do you agree that the emissions budgets we have proposed would put Aotearoa on course to meet the 2050 emissions targets?**

Strongly agree - Agree - Neutral - **Disagree** - Strongly disagree - Do not know

We do not think the first three emissions budgets will place New Zealand on course to reach our 2050 emissions targets. It leaves too much to do in the later years to 2050, and is overly reliant on trees to offset future emissions (which may be lost if large wildfires occur).

#### Our six big issues - future generations

**Big issues question 2. Do you agree we have struck a fair balance between requiring the current generation to take action, and leaving future generations to do more work to meet the 2050 target and beyond?**

Strongly agree - Agree - Neutral - **Disagree** - Strongly disagree - Do not know

We think that more could be done in the next 15 years (first three emissions budgets) to ensure that we do not leave future generations with too much work to do to meet our targets. Future generations have done nothing to cause the current climate crisis, so we should do everything possible to avoid leaving them a larger share of the burden of reducing emissions.

We also note that simply meeting a net zero target in 2050 is unlikely to be a sufficient contribution to limit global warming to 1.5°C if we do not make enough cuts in the next decade. If we do not take stronger action now, the costs and harms of inaction will largely fall on future generations.

#### Our six big issues - our contribution

**Big issues 3. Do you agree with the changes we have suggested to make the NDC compatible with the 1.5°C goal?**

Strongly agree - **Agree** - Neutral - Disagree (our changes are too ambitious) - Disagree (our changes are not ambitious enough) - Do not know

We support the Commission's recommendations on strengthening the NDC to make it compatible with the 1.5°C goal.

However we would prefer to see the difference between the proposed emissions budgets and the stronger NDC made up through more domestic cuts and offsets as opposed to simply increasing the amount of offshore mitigation to be purchased.

As a country with a history of high per-capita emissions, we have a moral obligation to ensure we are contributing our 'fair-share' towards global emissions reductions. If international offsets are unavoidable, they should be focused on actions which help vulnerable countries, such as our Pacific neighbours, take actions to reduce their emissions.

#### Our six big issues - role and type of forests

##### **Big issues 4. Do you agree with our approach to meet the 2050 target that prioritises growing new native forests to provide a long-term store of carbon?**

Strongly agree -  Agree - Neutral - Disagree - Strongly disagree - Do not know

We support an increasing prioritisation of new permanent native forests ahead of increased exotic forests. We acknowledge some exotics will still be required to supply wood for building materials and other uses.

#### Our six big issues - policy priorities to reduce emissions

##### **Big issues 5. What are the most urgent policy interventions needed to help meet our emissions budgets? (Select all that apply)**

Action to address barriers - Pricing to influence investments and choices - Investment to spur innovation and system transformation -  None of them

We support a combination of policy intervention types, as all will have a role in shaping our low emission transformation. Actions to reduce barriers to those on lower incomes will be vital to ensuring a just transition to a low emission economy. Strong pricing signals will be necessary to ensure investment moves towards lower emission options, and will help drive necessary innovation. Investments should be focused on providing options that enable people to choose affordable low-emission options. Investing in innovative system-wide transformations will also be necessary.

Behaviour change programmes will also be key to achieving our emissions reduction targets. Helping to inform the public of the emissions impact of the various choices they make will help enable positive change.

Behaviour change programmes need to be relevant locally, and take a multi-faceted approach that appeals to different groups. The *Smokefree* campaign has shown success overtime through a mix of targeted advertising, health messaging, as well as taxation to dis-incentivise smoking and programmes to assist people who want to quit smoking. A similar nation-wide campaign, which can be tailored to local needs, will be required to shift people's behaviour and encourage low-emission choices to be made.

#### Our six big issues - technology and behaviour change

##### **Big issue 6. Do you think our proposed emissions budgets and path to 2035 are both ambitious and achievable considering the potential for future behaviour and technology changes in the next 15 years?**

Strongly agree - Agree -  Neutral - Disagree - Strongly disagree - Do not know

We consider the emissions budgets are achievable, but that is in part due to the fact that they are not ambitious enough.

The New Zealand government (joining many territorial authorities including the Christchurch City Council) recently declared a climate emergency. As noted in our response to question 2 below, the first three budgets do not seem to match that sense of urgency. The proposed budgets will leave a significant quantum of reductions for later years and will not position New Zealand among leading nations in taking climate action. When considering how ‘affordable’ it is to achieve the budgets, the costs of inaction should also be considered.

More ambitious emissions budgets also send signals that action is urgent, and paradoxically are more likely to drive innovation and technological change which will in fact make the budgets more achievable.

As mentioned in Big issue 5, we think the report underplays the need for widespread behaviour change to achieve our emissions reduction targets, and is too reliant on technological change.

## 1. Do you support the principles we have used to guide our analysis? Is there anything we should change, and why?

Fully support - Partially support - Neutral - Do not support - Do not know

We support principles 1, 2, 3 and 6. It’s important that recommended actions get the country on track for the net zero 2050 targets, and agree our focus must be to decarbonise the economy primarily through domestic emission reductions, and then domestic sequestration. Creating options as we begin the transition to a low emission economy is sensible, as is increasing resilience to climate impacts as action is taken to reduce emissions.

We also suggest the following:

- Principle 4 (avoiding unnecessary costs), and Principle 7 (leveraging co-benefits) should be considered together. We suggest it be made clear that assessments of all costs and benefits are considered together, and include consideration of social, cultural, environmental and economic wellbeing. The costs of inaction should also be considered throughout.
- We suggest a principle on enabling public empowerment and behaviour change as a key to success.
- Principle 5 discusses ‘transition in an equitable and inclusive way’. For better clarity of meaning and purpose it could be expressed in terms of a *Just Transition*, a term used by the Ministry of Business, Innovation & Employment, and unions. It is crucial that people are involved in the decisions on their future, and not just receive ‘signals’ on what is planned.

## 2. Do you support budget recommendation 1? Is there anything we should change, and why?

**Emissions budget 1** About right

(2022 – 2025)

**Emissions budget 2** Not ambitious enough

(2026-2030)

**Emissions budget 3** Not ambitious enough

(2031-2035)

Council understands the first three emissions budgets are designed to set New Zealand on the path towards the net zero target for 2050. However, page 30 of the report also notes the

Commission was required by the Climate Change Response Act to consider ‘the ambition needed to contribute to the global goal of limiting warming to 1.5°C above pre-industrial levels’.

Council supports the Commission taking a precautionary approach and setting emissions budgets that are in line with New Zealand’s contribution towards limiting global warming to 1.5°C.

The first 3 budgets do not appear to be consistent with keeping global warming to 1.5°C.

IPCC guidance from its [1.5 Degree Special Report](#) states that pathways consistent with 1.5°C warming, would require global net CO<sub>2</sub>-e reductions of approximately 45% (from 2010 levels) by 2030, and get to zero by mid-century. There is concern that if enough cuts are not made globally in the next decade, we will not avoid exceeding 1.5°C warming, even if we reach net zero emissions by 2050. We note that the 2<sup>nd</sup> emission budget (ending in 2030) only represents a 17.2% net reduction in emissions from 2018 levels.

Accepting that there will be a lead in time required to ramp up action (reflected in budget 1), emissions budgets 2 and 3 do not appear to suggest the required level of cuts. We therefore support greater cuts in emission budgets 2 and 3 to align with the IPCC guidance. New Zealand must play its part in global efforts.

The suggested budgets from the commission do not appear to even meet New Zealand’s international commitments through the first Nationally Determined Contribution – which the commission itself stated are not combatable with limiting warming to 1.5°C.

We also note that pathways aligning with the IPCC models is not a guarantee of limiting warming to 1.5°C. The report notes (page 147) that ‘the IPCC selected these pathways as the ones that have a 50-66% chance to limit warming to 1.5°C.’ and that ‘the pathways with little or no overshoot are the most likely to deliver the best overall social, economic and environmental outcome’.

For an issue of such importance, we believe a more precautionary approach should be taken, and that the Commission should recommend smaller emissions budgets that have a greater chance of success. A 34% to 50% chance of failure is too great a risk for our communities.

### 3. Do you support our proposed break down of emissions budgets between gross long-lived gases, biogenic methane and carbon removals from forestry? Is there anything we should change, and why?

Gross long-lived gases **Not ambitious enough**

Biogenic methane **Not ambitious enough**

Forestry **About right**

We support separating gases in line with the Zero Carbon Act split gas approach, although it would make sense to also list biogenic methane’s CO<sub>2</sub>-e value under Budget recommendation 2 – as ultimately the net emission of CO<sub>2</sub>-e will determine total warming (whatever gas it’s from). This would also enable the public to have a better understanding of the total impact and share of our emissions which come from agriculture.

Council encourages more rapid reduction in biogenic methane which would enable more time to make changes in harder to abate areas of the economy which emit other greenhouse gasses. We think New Zealand could be a lot more ambitious on reductions of biogenic methane in the agricultural sector. For example, there is already an increased focus on research into reducing emissions from ruminant animals, and changing diet trends or lab grown meat may reduce the demand for meat in the future, enabling a reduction in stock numbers.

Council supports efforts to significantly increase carbon sequestration through native plantings.

**4. *Limit on offshore mitigation for emissions budgets and circumstances justifying its use*** - Do you support budget recommendation 4? Is there anything we should change, and why?

Fully support - **Partially support** - Neutral - Do not support - Do not know

We strongly support limiting opportunity for offshore mitigation. New Zealand has a responsibility to focus on domestic actions to reduce and offset our own emissions. We should not rely on others to help us achieve emissions reductions, and committing to domestic reductions would send a strong signal to the world that we are serious about playing our part in reducing global emissions.

However, budget recommendation 4.a. is somewhat confusing: 'The limit on offshore mitigation should be zero for the first three emissions budgets'. It is unclear whether this means there should be no offshore mitigation used in the first three budgets, or if there should be no limit to offshore mitigation.

We note that this seems inconsistent with the report's later recommendations which state the need for offshore mitigation to meet New Zealand's Nationally Determined Contribution (NDC), and also to meet the Commission's proposed first three emissions budgets (page 157).

While New Zealand's domestic emissions budgets for our net zero 2050 target and the international NDC are technically distinct, Council believes the policy towards offshore mitigation should be consistent for both our domestic and international commitments.

**5. *Cross-party support for emissions budget*** - Do you support enabling recommendation 1? Is there anything we should change, and why?

Fully support - **Partially support** - Neutral - Do not support - Do not know

We support enabling recommendation 1. Cross party support will be crucial in achieving our targets, and any steps to depoliticise decision-making should be encouraged. Recording parties' votes on emissions budgets will allow the public to hold them accountable for their decisions.

However Council also believes that the Commission's advice on all emissions budgets should be based solely on science, and the social, cultural, environmental and economic wellbeing of New Zealand, and not on political considerations of what may be palatable.

**6. *Coordinate efforts to address climate change across Government*** - Do you support enabling recommendation 2? Is there anything we should change, and why?

Fully support - **Partially support** - Neutral - Do not support - Do not know

We support enabling recommendation 2. We support the allocation of roles and responsibilities to a nominated Minister (or Ministers), and that funding requirements are assessed and met for each of the emissions budgets. Having clear lines of accountability will help ensure actions are delivered.

We also support the Commission's proposal to establish a "vote climate" budgeting portfolio approach so funds can be allocated and tracked across central government agencies.

**7. *Genuine, active and enduring partnership with iwi/Māori*** - Do you support enabling recommendation 3? Is there anything we should change, and why?

Fully support - **Partially support** - Neutral - Do not support - Do not know

We strongly support genuine, active and enduring partnership with iwi/Māori in developing and implementing climate action.

We support mātauranga Māori perspectives being included in our national response to climate change, and support taking an intergenerational kaitiaki approach.

**8. *Central and local government working in partnership* - Do you support enabling recommendation 4? Is there anything we should change, and why?**

Fully support - Partially support - Neutral - Do not support - Do not know

We support enabling recommendation 4. Successful climate action will require a genuine partnership between central and local government. New funding mechanisms will be required for local government to be able to help deliver on emissions reduction plans. Funding certainty for shared priority areas such as transport to ensure investments are driven towards low emission options would be of benefit to local government.

We support enabling recommendation 4.a., as alignment across legislation is needed to enable effective local government decision making to help our communities. We suggest 4.a. also includes specific reference to the Land Transport Act, as transport is one of the biggest sources of emissions in the country and it is vital that emissions reduction efforts are acknowledged throughout all relevant legislation.

Working more closely with local government while developing National Policy Statements on various issues would also help avoid inadvertently developing policy directions on one issue (such as housing) that are inconsistent with policy directions in other areas and lead to difficulty being implemented at the local level. Climate considerations need to be consistently applied through all policy statements to local government.

With the urgency of delivering action to reduce greenhouse gas emissions we recommend that the progress indicator dates for the government outlining its plans are brought forward as early as possible.

We suggest the Commission also considers a wider range of approaches to enable the rapid adoption of best practice throughout New Zealand. An example of this would be for the government to develop climate-related 'tool boxes' that can be delivered locally. This approach is being developed for climate vulnerability assessments. It could also be applied to mitigation efforts.

The government is delivering its Genless engagement programme that in our view, is not having a local impact, as it is not linked in to local partners. We would suggest developing national tools like the [Future Fit](#) or [Live Lightly](#) tools that can be delivered by local councils throughout NZ (i.e. nationally co-developed and locally delivered).

**9. *Establish processes for incorporating the views of all New Zealanders* - Do you support enabling recommendation 5? Is there anything we should change, and why?**

Fully support - Partially support - Neutral - Do not support - Do not know

We support incorporating the views of all New Zealanders. It is important that engagement leads to tangible action to continue to build faith in community led climate planning.

Democratic processes need to be both participatory and deliberative. Although citizen's assemblies are mentioned, overall there is relatively little attention paid to such meaningful democratic buy-in across groups and sectors in society. Including people's views needs to be an ongoing process. When considering the composition of any potential citizen's assemblies the government will need to carefully balance the need for a broad (and potentially randomly selected) cross-section of society, with the need to keep the partnership with mana whenua at the centre of climate planning.

Incorporating the views of all New Zealanders will also require a multicultural approach to engage with various cultures who may be underrepresented at the political level.

As young people will be significantly impacted by climate change throughout their lives, Council would like to see the importance of including the voices of children and young people embedded in recommendation 5.

As a signatory to the UNICEF's Children's Convention NZ government has a responsibility to ensure those rights are fulfilled. UNICEF's Children's rights are summarised here:

<https://www.occ.org.nz/assets/Uploads/EveryChildHasRightsA3Poster-Paths-0207-FF.pdf>. In particular number 12:

This would be in line with the recommendations of the 2019 report 'Are We Listening?' by the Children's Convention Monitoring group (which monitors the NZ government's implementation of the UN Children's Convention). Specifically see commitment 4 of the report:

<https://www.occ.org.nz/assets/Uploads/CMG2019-Online-FINAL-full2.pdf>. The other recommendations of the report also support making explicit provision for children's voices to be incorporated in policy response to climate change.

10. **Locking in net zero** - Do you support our approach to focus on decarbonising sources of long-lived gas emissions where possible? Is there anything we should change?

Fully support - Partially support - Neutral - Do not support - Do not know

We support the approach to focus on decarbonising sources of long-lived gas emissions where possible, and the acknowledgement that current policies are insufficient to achieve New Zealand's emissions targets.

11. **Locking in net zero** - Do you support our approach to focus on growing new native forests to create a long-lived source of carbon removals? Is there anything we should change, and why?

Fully support - Partially support - Neutral - Do not support - Do not know

We support the approach to focus on growing new native forests to create a long-lived source of carbon removals, and acknowledge the multiple benefits to biodiversity and ecology. Natives can also improve fire resistance compared to many exotic pines and are useful in mitigating soil erosion and landslides.

While this recommendation recognises the current challenges with growing and maintaining native forests (mentioned in 3.2), strong consideration needs to be given to how to mitigate these challenges. For example, we understand that in some areas our native forests are struggling with limited seedlings due to pests stripping these out. Therefore pest control will also become an important tool in our carbon sequestration efforts, to ensure young seedlings survive and continue the natural forest cycle. The Department of Conservation recommends focusing efforts on regenerating native bush to encourage longer lived hardwood forest to development.

<https://www.doc.govt.nz/globalassets/documents/conservation/threats-and-impacts/animal-pests/wild-animal-control-emissions-management.pdf>

It is also important to focus on future conditions when deciding which long-lived native species to plant. Native bush locks water into an area, so water needs downstream in the catchment areas must be taken into account when choosing where to plant new forests.

If we do increase exotic plantations, there is also an opportunity to change the way we design our buildings to use less carbon intense concrete and build more with wood.

12. **Our path to meeting the budgets** - Do you support the overall path that we have proposed to meet the first three budgets? Is there anything we should change, and why?

Fully support - Partially support - Neutral - Do not support - Do not know

Overall the key transitions in the emissions paths in table 3.1 look sound.

However we believe the transport path should also include specific mention of land use and urban form, as a key pathway to reducing the overall need to travel (and therefore emissions) – living in proximity to key opportunities and reducing the need to travel or number/length of trips (not just remote working as mentioned).

Christchurch City Council and other urban councils are increasingly focused on improving access to public and active transport as a key way to reduce our emissions. A key component of this work involves redesigning / upgrading streets and urban form to encourage walking and cycling. This will become more difficult if not recognised in national policy, and if the major focus nationally is simply to replace internal combustion vehicles (ICE) vehicles with electric vehicles (EVs). Improved urban form takes a relatively long time to achieve, however decisions made now will impact on people's choices for decades to come.

Council also notes the emissions budget for transport is heavily focused and reliant on rapid uptake of on EVs which may disproportionately impact people on lower incomes. This raises questions of equity, and the (lack of) affordability for many in the community needs to be addressed. Significant support will be required to ensure access to affordable low emission transport options for people on lower incomes.

There have also been concerns expressed to Council with regard efforts to phase out gas use. The report could more clearly state that the current focus is on heating systems in buildings and not on personal BBQs, or camping equipment etc.

13. **An equitable, inclusive and well-planned climate transition** - Do you support the package of recommendations and actions we have proposed to increase the likelihood of an equitable, inclusive and well-planned climate transition? Is there anything we should change, and why?

Fully support - Partially support - Neutral - Do not support - Do not know

We support all efforts to ensure an equitable, inclusive and well-planned climate transition.

The recommendations do however appear to take a 'top down' approach to planning with communities. We support stronger recommendations on working *with* affected communities and workforces to achieve greater equity and inclusivity. The Commission should recommend that localised planning responses are democratic, collective and include all those affected by the transition.

The report often notes collaboration but seldom mentions collective responses. As an example, unions are never mentioned apart from one Spanish just transition example cited in the evidence report which is not developed any further. Those affected by the transition and changes, especially occupationally, must be central to decision-making at the highest possible level in the most meaningful way when workplaces and occupations transform.

Discussion of 'localised transition planning' and 'active social dialogue' need to be embedded from the outset or risk not being fully inclusive. The workforce must be involved decision-making process when their workplaces transform.

As well as a principle, Just Transition is a process and practice in achieving just and equitable outcomes. In this necessarily broader sense, Just Transition also becomes a restorative perspective taking into account wealth and power inequities so that real climate change transformation produces real economic and social transformation. A Just Transition requires an ongoing dialogue with those most affected by climate change.

Addressing existing inequalities and inequities will be essential to achieving the recommendations. More emphasis should be given to the co-benefits of not just climate policy but other policies that have climate change benefits, e.g. implementing the Welfare Expert Advisory Group recommendations to help address the noted uneven impacts of the climate change transition. At a broader level, it also means better funded and resourced public services to underpin the transition.

Overall taxation policies need to be addressed when considering incentives or pricing mechanisms to drive change or the transition to a low emission economy will not be equitable.

Transport should be included in any discussion of an equitable, inclusive transition – as it is key to people having the ability to access opportunities including work and education. As discussed elsewhere, while transitioning the country’s light vehicle fleet away from fossil fuels is vitally important, equity issues need addressing regarding costs - especially in early budget periods before a significant 2<sup>nd</sup> hand fleet is available. An example of an initiative that aims to do this is a pilot scheme with a shared fleet of electric vehicles and e-bikes at a Ōtautahi Community Housing Trust development in Christchurch.

More focus on urban form (to make cycling/walking more attractive and safe), and on public transport needed to ensure more equitable transition for those who cannot afford an electric vehicle, or use other transport modes. It seems odd that the report notes that public transport cannot be accessed by some disabled people so they need continued access to cars - when many other disabled people who don’t drive use public transport and would benefit from an improved system.

In the broader sense, a more holistic view of ‘costs and benefits’ across all levels of government is needed to ensure a more equitable transition – social, cultural and environmental wellbeing must be given as much emphasis as what’s viewed as financially ‘affordable’.

#### 14. **Transport** - Do you support the package of recommendations and actions for the transport sector? Is there anything we should change, and why?

Support all the actions - **Support some of the action** - Do not support these actions - Do not know - Neutral

We support *necessary action 2* with its focus on reducing the need for private vehicles through support for walking, cycling, and low emissions public and shared transport.

We strongly support necessary action 2a. ‘Significantly increase the share of funding available for these types of transport investment, and link funding with achieving our emissions budgets’. This would help ensure that long term transport investments move our emissions in the right direction instead of enabling investments to progress which lock us into a high emissions pathway for decades to come.

**Lack of ambition on active transport** - We believe however that the report underestimates the appetite in urban communities for greater mode-shift. For example, Christchurch has seen rapid uptake of e-bikes and e-scooters, which are now seen as realistic alternatives to cars for many journeys. Christchurch has seen an 80% increase in cycling numbers since 2016 during annual peak hour cycle counts (see <https://newsline.ccc.govt.nz/news/story/christchurch-cyclists->

[change-up-a-gear](#)). As we continue our focus on upgrading our streets to make alternative modes more attractive we believe this mode-shift will continue to increase.

**Behaviour change** - Programmes run by the Council have had a sizeable impact on mode shift by staff from 40 organisations (over 6000 staff) we have directly worked with. Annual customer surveys from 2017-19 show an 11-percentage point increase in the share of staff walking and cycling to work, for those organisations which engaged in the full programme. A further 14% switched to the bus, and there was a 28% decline in single occupancy car use (see <https://ccc.govt.nz/transport/getting-to-work/travelplanning/> for more details on the programme). Each workplace engagement includes 'desk to desk' 1:1 journey planning assistance for staff, including information, advice and incentives to try a new mode. This has been the critical step, as individualised advice is key to help people overcome real or perceived barriers for their specific situation. We believe that if such programmes – as well as behaviour change activity with schools and individual communities - were scaled up with funding support at a national level and local delivery by councils, they would result in far greater mode-shift and behaviour change than assumed by the Commission in the report.

Whilst these behaviour change programmes are labour intensive, they are typically significantly cheaper than infrastructure investment to achieve a similar change in congestion levels and therefore operational emissions reduction. Because they are focussed on behaviour change rather than infrastructure there are also savings to be made in embodied carbon through negating the need to invest in carbon intensive infrastructure.

**Co-benefits and health impacts-** Council also thinks the Commission should place a greater weight on the public health benefits of active and public transport. Active transport has a large 'public good' aspect which has multiple co-benefits, including improved health, and needs to be funded accordingly.

Greenhouse gas emissions are only one of many pollutants that predominantly come from private vehicle travel. By reducing the number of vehicles on our roads, there will be corresponding reductions in noise pollution, as well as a reduction in tyre wear and other particulates running off and polluting waterways.

The New Zealand Medical Journal recently published an article outlining the way that climate action could either help address, or conversely add to the public health challenges and inequities in New Zealand (see <https://www.nzma.org.nz/journal-articles/the-climate-change-act-will-now-shape-the-nations-health-an-assessment-of-the-first-policy-recommendations-to-reach-our-zero-carbon-target?>). These impacts are not fully captured in the Waka Kotahi (NZTA) investment decision making framework.

One of the key ways to address both our climate crisis and public health needs is to encourage, and make corresponding investments, in active transport. The report doesn't give much attention to the barriers to walking and cycling and micro-mobility, or the actions to address them. Passing the Ministry of Transport's *Accessible Streets* programme into law will encourage mode shift to active transport by making our footpaths, shared paths, and cycleways safer and more accessible (see <https://www.transport.govt.nz/area-of-interest/walking-and-cycling/accessible-streets/>).

Changes to encourage more active transport choices don't have to be expensive. Policy changes such as reducing speed limits in urban areas, reducing school speed zones, or implementing a 1.5 metre passing distance for bikes not only reduce injury risks to all types of road users, but help reduce emissions as more people feel safer biking, walking, and scooting around the city. Safety - perceived or actual - is a key determinant of people's willingness to use active transport modes.

**Public transport** - Increasing public transport by 120% by 2030 also seems weak when the status quo in New Zealand is so low compared to other countries. We would have liked the Commission's

report to be the place where Mass Rapid Transit (MRT, bus or light rail) was proposed, and a direction given to prioritise public transport corridors. MRT corridors ensure that the key barriers to public transport (frequency and reliability) are removed, making public transport more attractive in comparison to driving. Improving uptake of public transport will help avoid overreliance upon electrifying our vehicle fleet, which might otherwise exacerbate the problems caused by the increasing number of vehicles on our roads - including congestion, reduced water quality, reduced safety, and a reduction in the liveability of our streets and cities.

**Urban form** - We believe the report could benefit from greater recognition of the impact of land use and urban form on active and public transport uptake, as well as recognition of the problems posed by increasing numbers of vehicles on our roads (regardless of how they are powered) to broader safety, environmental, and amenity outcomes in urban areas (please see note on difficulties with existing national policy settings regarding *Urban Form in question 15* below).

**Electrification of the fleet** - In addition to encouraging a greater focus on mode-shift to public and active transport, and reducing the overall need to travel, we also support actions to significantly accelerate the uptake of zero exhaust emission battery electric vehicles to reduce emissions. In urban areas this needs to be balanced with efforts to reduce congestion as roads get more crowded, with an acknowledgement that encouraging large scale electric vehicle uptake may undermine efforts to make active and public transport comparatively more attractive.

**Feebate or subsidy for zero exhaust emission vehicles** - We support the government providing fiscal incentives such as a feebate or subsidy to reduce the upfront cost of zero exhaust emission vehicles to ensure we quickly reach upfront cost price parity with internal combustion engine vehicles. It is important from an equity perspective that electric vehicles quickly become more affordable and this will also require a well-functioning second hand market.

**2030 ban on ICE passenger vehicle imports** - Council supports bringing forward a ban on imports of ICE vehicles to 2030, in line with the United Kingdom and other countries. New Zealand has a comparatively long average lifespan of private vehicles, so new ICE cars will remain on our roads for years to come. If New Zealand's deadline lags behind other countries, we risk becoming a dumping ground for inefficient ICE vehicles, and this will make it increasingly difficult to meet our emissions targets. A clear deadline will give certainty to the market, and encourage a phase out of ICE vehicles on our roads.

**Definitions of 'Electric Vehicles' - Issues with plug-in hybrid electric vehicles** - We recommend that the Government delivers policy and action that clearly concentrates on having a feebate or subsidy incentive for zero exhaust emission vehicles only, i.e. battery electric vehicles, and not have comparative incentives for plug-in hybrid electric vehicles. This is because:

- Plug-in hybrids can run on either conventional fuel, or electric batteries. Once purchased, the government has no way of knowing which fuel system the consumer will primarily use to power their vehicle, and therefore will not be able to estimate the greenhouse gas emission reductions or air pollution reduction from incentives for plug-in hybrids.
- Plug-in hybrid electric vehicles generally have a limited battery electric range. It has been suggested in overseas investigations that there is significant use of fossil fuel by users of plug-in hybrid electric vehicles. Some could have been purchased to qualify for subsidies / tax breaks available for 'electric' vehicles without ever being plugged in.
- Plug-in hybrid electric vehicles do not therefore have the same associated environmental and health benefits as battery electric vehicles.
- Plug-in hybrid electric vehicles have two fuel systems and associated complexity which could increase maintenance, while battery electric vehicles are low maintenance.

- The range (estimated distance that can be travelled on a fully charged battery) of battery electric zero exhaust emission vehicles available has increased and continues to increase. There are zero exhaust emission battery electric light passenger and light commercial vehicle alternatives available now, and in the case of battery electric buses these will be available on the market relatively soon. Therefore battery electric vehicles can perform similar functions as plug-in hybrid electric vehicles.
- International evidence has been mounting that real world use of plug-in hybrid electric vehicles is not as good at reducing greenhouse gas emissions compared to what was being promoted therefore they should not be categorised as low greenhouse gas emission vehicles e.g.  
<https://www.transportenvironment.org/press/plug-hybrids-new-emissions-scandal-tests-show-higher-pollution-claimed>  
<https://theicct.org/publications/phev-real-world-usage-sept2020>  
<https://www.motoringresearch.com/car-news/the-problem-with-plug-in-hybrids/>  
<https://www.emissionsanalytics.com/news?year=2021>

**Greenhouse gas emission factor for plug-in hybrid electric vehicles-** It is recommended that the Government amend the greenhouse gas emission factors for plug-in hybrid electric vehicles to reflect equivalent greenhouse gas emission factors that are used for internal combustion engine vehicles. The published plug-in hybrid electric vehicle greenhouse gas emission factors are misleading and are over estimating greenhouse gas emission reductions from the use of plug-in hybrid electric vehicles.

**Battery electric vehicle energy efficiency ratings and vehicle range standards-** It is recommended that the Government ensure that mandatory energy efficiency ratings (using a best practice international rating system) for battery electric vehicles are used so vehicle purchasers can compare the energy efficiency of different models of battery electric vehicles, i.e. kWh used per 100km, and that these ratings are required to be clearly displayed by battery electric vehicle sellers.

It is very important for purchasers of new battery electric vehicles that the displayed range (estimated distance that can be travelled on a fully charged battery) is from a recognised best practice range testing international standard, such as the Worldwide Harmonised Light Vehicle Test procedure (WLTP) and the Environmental Protection Agency (EPA) test, that is close as possible to real world vehicle use.

It is recommended that there is a requirement for dealers to provide more information to potential purchasers of battery electric vehicles to ensure purchasers are aware of the different battery electric range testing standards and which would be most useful for their needs.

Some references:

- <https://www.eurococ.eu/wltp-cycle-replaces-nedc>
- <https://www.jdpower.com/Cars/Shopping-Guides/electric-vehicle-range-testing-understanding-nedc-vs-wltp-vs-epa>
- <https://cleantechnica.com/2020/08/31/epa-highway-range-and-real-world-highway-range-are-two-different-things/>
- <https://www.manufacturing.net/automotive/news/21195225/why-electric-vehicle-ranges-vary-from-epa-estimate>
- <https://thedriven.io/2019/08/07/why-are-new-electric-vehicle-range-estimates-often-so-different/>

**Identification of zero exhaust emission vehicles -** It is recommended that the Government develop and action a clear vehicle number plate identification system so all zero exhaust emission battery electric vehicles can be easily identified by Government and local authorities. This will

assist in identifying zero exhaust emission vehicles for zero emission zones and for other regulatory and incentivised activities.

**Rail** - Council supports efforts to increase the use of rail as a low-emission transport option for New Zealanders. The feasibility of electric light-rail as part of a mass-rapid transport network in greater Christchurch is currently being investigated at the sub-regional level to help reduce transport emissions.

An opportunity also exists to complete electrification of the national rail network and increase rail freight capacity as an alternative to diesel trucks.

**Aviation** - Council notes there is little discussion on the impact of aviation as a significant source of emissions. The New Zealand government could play a leading role in building domestic and international action on aviation emissions accounting, offsetting, and emission reduction efforts.

**Shipping** - While acknowledging international shipping is not under the remit of the Commission, we think as an isolated country, New Zealand could play a leading role in promoting emission reduction and accounting standards for shipping.

**15. Heat, industry and power sectors** - Do you support the package of recommendations and actions for the heat, industry and power sectors? Is there anything we should change, and why?

Support all the actions - **Support some of the actions** - Do not support these actions - Do not know  
- Neutral

We support the initiatives to reduce emissions from process heat.

**Urban Form** - The Commission's report in the evidence for 4b highlights the importance of growing up rather than out, although does not include any analysis on why the market direction has historically been to grow out. Without addressing these underlying tensions, compact cities are difficult to achieve. It is clear that the Climate Change Commission has included consideration of the current and proposed changes to the resource management framework which guides urban form development, although little consideration has been included in this report on the conflict with the national direction articulated through the NPS-UD on responding to market led development and urban sprawl that is out of sequence and unplanned (NPS-UD Policy 8). Necessary action 10(b) (page 117) is to "ensure a coordinated approach to decision making is used across Government agencies and local councils to embed a strong relationship between urban planning, design, and transport so that communities are well designed, supported by integrated, accessible transport options, including safe cycleways between home, work and education." Council strongly supports a coordinated approach to decision making across Government agencies and local councils, particularly establishing a hierarchy when there are competing or conflicting national directions. The general direction promoted by central government allows for increased greenfield development that are considered well-functioning urban environments to address the growing housing crisis. This direction could potentially conflict with the evidence provided by the Climate Change Commission for increased consolidated urban form and density.

Christchurch City Council seek more recommendations from the Climate Change Commission on compact urban form, and establishing a clear hierarchy for competing environmental priorities particularly with regards to greenfield development and urban sprawl in response to the housing crisis.

The Council encourages a multi-disciplinary and collaborative approach to explore the issues and opportunities related to quality, affordable, low carbon urban form (a similar approach was adopted by the Council's [Housing Matters Programme](#)). By including representatives from the land

and housing development sectors, builders, designers, real estate, investors, banks, insurers, educators, academics and policy makers a shared understanding could be achieved and a pathway. Some examples of specific issues experienced in Christchurch are:

- a) difficulties around land amalgamation preventing full use of higher density zones and resulting in poor liveability outcomes, that undermine community perceptions of further densification (e.g. sausage flats squeezed onto narrow lots). A recent [review of medium density housing study](#) by the council explored design issues in Christchurch.
- b) pressure from government and developers to release land on the fringes of towns and cities to help manage the high cost of housing, which results urban sprawl that is poorly connected to public transport and amenities. Few tools to make land focused property developers adopt good practice for, plot orientation, public transport, cycling and local amenities.
- c) covenants placed on greenfield land by developers that set minimum sizes for homes that make them less affordable, large and low density.
- d) the cost and uncertainty (risk) around the rehabilitation of brownfield sites resulting in large areas of underutilised land.
- e) enabling more diverse development and tenure arrangements to deliver more affordable and liveable residential developments at higher densities.
- f) the very low number of NZ developers able to create quality higher density housing. Most developers focus on stand-alone single story dwellings.

**Energy Efficient Buildings** - We support the Commission's recommendation to raise the energy performance of buildings and to expand the services and support available to help owners to raise the performance of their buildings. The [Healthier Homes Canterbury service](#) is successfully enabling residents to access advice and financial support and its success linked to the continuation of the [Warmer Kiwi Homes](#) government subsidy for insulation and home heating appliances.

The New Zealand Building Code needs to be updated to better deliver health and wellbeing outcomes, reduce energy bills and respond to climate change. We are currently well behind many other countries including [Australia](#) and the [United Kingdom](#).

We suggest the Commission better considers whole of life emissions within the building sector. Lifecycle tools such as [LCA Quick](#) and the [ISCA Materials Calculator](#) can help designers to eliminate emissions throughout the lifecycle of buildings and infrastructure. Local and central government sustainable procurement processes can encourage the rapid adoption of such tools and green building approaches.

Because of a rapid proliferation of electric appliances in homes and workplaces, it is vital that New Zealand also raises and regularly checks its [Minimum Energy Performance Standards](#) for appliances and equipment (especially for space and water heating appliances that consume 60% of household energy – [BRANZ HEEP Study](#)). This would be especially important as we move away from natural gas to electric heating, cooking and water heating options. The benefits of an independent evaluation of appliances such as that provided by the [Consumer](#) cannot be understated. Tools that enable informed choices to be made by government, businesses and households will be useful for selecting low emission technologies.

We suggest the Commission also considers the role of water conservation. In Christchurch the pumping of water to and from homes is a significant consumer of energy and carbon for Council. Significant advances can be made through water efficiency standards and behaviour change programmes especially around summer garden water use. Water consumption will also be

exacerbated by the projected warming and drying of our Canterbury climate. Efforts to reduce water will both save emissions and increase resilience to water shortages.

**Energy Resilience:** - As we transition to renewable energy sources, we need to increase resilience by ensuring there are good designs for clean backup generators for use in emergencies where power is lost.

**Building materials:** - These are mentioned more in the energy section (e.g. page 14 of Evidence 4a) but not the section on buildings (e.g. page 24 of section 4b of the evidence), which mostly concentrates on *operational* carbon footprint of buildings.

Given the rate of growth we are experiencing, it is really important that information on carbon footprints that are embedded at the time of building are associated with other advice on the building industry. Roads and other infrastructure also have high levels of embodied carbon which needs addressing further in the report. It is not made clear in the advice document that the emissions associated with using concrete as a building material contributes significantly to the country's emissions.

We recommend more prominent support for low greenhouse gas alternatives, including Mg rather than Ca –based concrete, and for the innovative methods of concrete production that capture and sequester carbon-based gases during the process.

We also recommend the promotion, encouragement and support of innovative designs that use other materials, or that use less concrete (e.g. by incorporating stronger, or less corrodible reinforcing). Reducing demand is the best way forward to reduce concrete-related emissions.

Once customers are aware of the issues, people can start to do carbon cost benefit analysis and make alternative choices.

Requiring reporting on embodied carbon footprints would also help this shift.

More work needs to be done to understand greenhouse gas emissions from wastewater treatment and the options to reduce these. One possibility is subsurface wetlands, which can convert the nitrogen in wastewater through to harmless nitrogen gas, and also can restore the mauri of the water. These could be a win-win both in terms of reducing greenhouse gas emissions and addressing cultural concerns with the direct discharge of wastewater to water.

Collecting water at source (e.g. rainwater tanks) rather than just using energy to pump around towns is resilient and saves energy- this should be encouraged, especially in areas that are projected to be drier.

We support further use of wastewater as a heat source as it is significantly warmer than ground water as a heat source and therefore more efficient.

## 16. **Agriculture** - Do you support the package of recommendations and actions for the agriculture sector? Is there anything we should change, and why?

Support all the actions - **Support some of the actions** - Do not support these actions - Do not know  
- Neutral

Agriculture should be fully included under the ETS at an appropriate CO<sub>2</sub>-e if we are serious about reducing emissions in the sector. We agree that pricing agricultural emissions send signals that would drive innovation and efficiency in the sector.

There is a lot of potential to reduce short-lived gases through changes in agriculture that are not given sufficient attention in the report, including changes in feed, vaccinations, and breeding programs which focus on reducing emissions from ruminant animals.

17. **Forestry** - Do you support the package of recommendations and actions for the forestry sector? Is there anything we should change, and why?

Support all the actions - **Support some of the actions** - Do not support these actions - Do not know  
- Neutral

We support encouraging innovative design using timber rather than concrete where possible in buildings, as we phase out exotic plantations and move towards more natives.

Incentivising both new planting and keeping existing vegetation cover is important. The ETS has been criticised for failing to incentivise the preservation of existing vegetation, and needs a serious overhaul.

We also need to avoid an overreliance on trees as a way to sequester emissions as recent research indicates that trees may not be able to sequester as much carbon if temperatures rise (see [How close are we to the temperature tipping point of the terrestrial biosphere? | Science Advances \(sciencemag.org\)](#)). The increased fire risk from predicted hotter, drier conditions will also increase risk of wild-fire which could destroy forests which we rely on as carbon sinks.

18. **Waste** - Do you support the package of recommendations and actions for the waste sector? Is there anything we should change, and why?

Support all the actions - **Support some of the actions** - Do not support these actions - Do not know  
- Neutral

We support the Commission's draft recommendations to support greater product stewardship and increased circularity of our economy. However, the report focuses on gases produced at the end of life, but we feel more attention could be given to efforts to reduce waste in the first place. The report discusses the need to reduce waste at the source – however this does not seem to follow through into the recommendations.

Necessary action 13.a. The plan to reduce waste emissions by at least 15% by 2035 should be achievable, however we note initiatives to date haven't resulted in reduced waste to landfill.

13.b. Investing waste levy revenues to reduce waste emissions – this needs a greater focus on improved product design/reduction of waste at source and ability to repair, and not just resource recovery and promotion of reuse and recycling.

13.c. Measuring and increasing the circularity of the economy by 2025 – this aspect needs more details, a high degree of collaboration between various regulators will be required to get this to work in practice. True circularity is about the interconnectedness of processes and sharing of systems and not simply issuing a resource consent for a single discharge to a single property owner.

13.d. Prioritising product stewardship schemes for products with high emissions potential - this is a good idea but product stewardship schemes don't always result in reduced waste generation. Some of the products that are produced as a result of recycling or other disposal options aren't sustainable in the long-term.

13.e. We support efforts at improved data collection.

We support the Commission's advice about the importance of managing methane gas emitting from landfills. Stronger resource consent conditions for newly granted landfills will help with this and the NZ-wide trend toward larger, modern, lined, regional landfills – better designed to capture landfill gas. Landfill operators should be encouraged to not only to destroy methane (e.g. gas flaring), but to use this natural gas beneficially, as an energy source (to achieve a win-win). As an

example of this the NZ Projects to Reduce Emissions Scheme previously supported landfill projects that beneficially used this biogas such as the [Christchurch Burwood Landfill Gas Collection project](#).

Cleanfills are often overlooked by Councils because they are not seen as “landfills” and Councils often have poor data for cleanfills yet a considerable volume of waste is disposed in this way. Many cleanfills receive building and demolition materials able to generate methane (e.g. timber, paper and cardboard from packaging building materials, and vegetation from site clearance). It is important that a Waste Levy incorporates cleanfill operators and that rules / bylaws are in place to encourage the separation of building and demolition materials – so that only inert materials are disposed of in cleanfills.

In Canterbury timber represents [20% of the waste sent to Kate Valley](#). Timber treated with Copper, Chrome, Arsenic and Boron remains a considerable challenge for NZ. Currently the only safe disposal option is in a modern lined landfill. Concern around leaky buildings has meant that our Building Code requires the use of treated timber. Smarter weatherproof building design and a change in the type of forestry grown, can avoid the need to treat such large quantities of timber, and so provide greater opportunity for reuse or recycling. This timber waste problem will be exacerbated by the trend towards building with wood as a way to deliver low carbon buildings.

#### **19. Multisector strategy - Do you support the package of recommendations and actions to create a multisector strategy? Is there anything we should change, and why?**

Support all the actions - **Support some of the actions** - Do not support these actions - Do not know  
- Neutral

To enable the market transformations necessary, we support the need to raise the cost of carbon in the New Zealand economy. This must also have strong alignment to the five-yearly carbon budgets set by the Government. We agree with the Commission’s advice that the price cap set by government must be raised as soon as possible, or removed to better allow the market to set the price of carbon. This should also be done in association with other policies that help manage impacts on our vulnerable communities and industries.

We support the need for mandatory disclosure of climate risks and exposure in the market place. This will be a vital tool to enable informed decisions. To help standardise disclosures on climate related exposure, and to guide better decision making, we would encourage the government to signal the carbon price to be used for those calculations, based on the proposed 5 yearly carbon budgets for New Zealand. The Commission has already indicated that the carbon abatement price needs to be \$140 per tonne of carbon dioxide equivalent by 2030 and \$250 by 2050 to achieve the levels of changes needed in the economy. Providing long-term certainty will aid long term investment decisions.

We support the Commission’s advice around refrigerant gases (F-gases) that have a very high global warming potential (approximately 2500 times the warming impact of carbon dioxide). We suggest that more rapid gas substitution (to gases with lower global warming potentials) is possible and that much greater care and control is needed during the disposal of appliances that contain F-gases (refrigerators, air conditioners etc.). It is vital that all appliances containing F-gases are adequately decommissioned to prevent gas needlessly escaping into the atmosphere. Standards, training and producer responsibility would all help address this emission source.

#### **20. Rules for measuring progress - Do you agree with Budget recommendation 5? Is there anything we should change, any why?**

**Support all the actions** - Support some of the actions - Do not support these actions - Do not know

- Neutral

We support the package of rules for measuring progress in Budget recommendation 5. We strongly support recommendation 5c.v. (investigating ways to include small lots of trees and regenerating vegetation into future target accounting), and 5.d. on page 144, (ensuring that voluntary offsetting is matched by a reduction in available credits under the ETS to keep us within the relevant emissions budgets).

## 21. **Nationally Determined Contribution (NDC)** - Do you support our assessment of the country's NDC? Do you support our NDC recommendation?

Fully support - Partially support - Neutral - Do not support (too ambitious) - Do not support (not ambitious enough) - Do not know

We agree with the Commission, that NZ's Nationally Determined Contributions are currently insufficient and do not reflect the new impetus and understanding from the latest IPCC science ([1.5 Degree Special Report](#)). Because of the significant risks involved to New Zealand and the world, it is vital that our targets and actions are bold, giving us the best chance to remain below 2 (and preferably 1.5) degrees Celsius of warming.

We therefore request that the Commission recommends a stronger, more ambitious NDC for New Zealand. We do not support the Commission's view in NDC recommendation 2b (page 154) that it is a 'political decision' how far to cut emissions beyond 35%. It is a political decision *how* we may get to the new target – but the Commission is ideally placed as an independent expert body to make a recommendation on the level of a new NDC based on the science and other considerations as outlined

We also encourage the Commission to recommend interim emissions reduction targets for NZ (e.g. for 2030) so we are better able to track progress towards our targets and align with the following IPCC advice: *In pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO2 emissions must decline by about 45% from 2010 levels by 2030 (40–60% interquartile range), reaching net zero around 2050 (2045–2055 interquartile range).*

Because New Zealand is a relatively wealthy, innovative and capable country who also has one of the highest rates of per capita emissions in the world, we need to make deeper and earlier emissions reductions than other less developed nations. To do our fair share, we need to start early and move swiftly to reduce all emissions.

We also suggest the Commission further considers how the speed of emission reductions may change over time – it is likely that the pathway to zero net emissions will not be linear (as it appears the Commission is modelling), but sigmoid. After a slow initial start because of inertia in our systems and institutions and the time needed to ramp up our actions, the quick and easy ways to reduce emissions will be deployed. As we move toward our net zero emissions goal the hardest options will remain, slowing our progress toward the end goal.

## 22. **Form of the NDC** - Do you support our recommendations on the form of the NDC?

Support - Somewhat support - Do not support (too ambitious) - Do not support (not ambitious enough) - Do not know

We support enabling recommendation 1, and think New Zealand should do all that it can to reduce domestic emissions.

We also acknowledge the important role we must play in helping other countries reduce their emissions. We agree with enabling recommendation 1.b, and agree that wherever possible, offsetting should support developing nations to transition to an equitable, clean energy, low

carbon future. We consider that New Zealand has some particular capabilities that could be explored such as in agriculture and geothermal sectors. Offsetting should seek to build capacity within a less developed nation, but also be a market potential for New Zealand in developed nations. This type of win-win approach was created through the [Cleaner Development Mechanism](#) and should be explored in the Commissions advice to government.

**23. Reporting on and meeting the NDC** - Do you support our recommendations on reporting on and meeting the NDC? Is there anything we should change, and why?

Support - Somewhat support - Do not support (too ambitious) - Do not support (not ambitious enough) - Do not know

We support enabling recommendation 2, although think the Commission should provide clear advice to the government that offshore credits should be limited to use in emergencies, such as in the case of significant natural disasters.

Domestic emission reductions, then domestic offsets must be the priority. Easy access to international carbon markets (which are often poorly regulated), will likely reduce the incentive for domestic emissions reductions.

It sends very mixed messages to the public, and to the international community, for the Commission to recommend avoiding international carbon markets and offsets for our domestic targets, and then open the door to them for our international NDC commitments.

**24. Biogenic methane** - Do you support our assessment of the possible required reductions in biogenic methane emissions?

Fully support our assessment - Somewhat support our assessment - Do not support our assessment

- Do not know - Neutral

We support the rationale provided that New Zealand should reduce its biogenic methane emissions by at least the global average required to meet the 1.5°C goal.

However we feel there needs to be further advice from the Commission under biogenic methane recommendation 1. The recommendation is only for future reductions required by 2100 – not by 2030, or 2050 - in line with target years in the Zero Carbon Act. Such a distant target is unlikely to drive the scientific or agricultural innovation necessary to meet the earlier target years. New Zealand has an opportunity to lead globally on agricultural emission reductions, and the government needs to support these efforts.

**Additional Note.**

The Council notes new research on the importance of protecting carbon stores in marine sediment, and suggests the Commission investigate this further and include it in further advice to the government.

Large amounts of carbon stored in marine sediment is released when the sea floor is scraped during bottom trawling, a process which also severely damages the marine eco-system.

We request that the Commission suggests that the government joins international efforts to advocate for the protection of sea floors as a way to both prevent the release of carbon stores, and protect the marine environment.

If international agreement is reached, an opportunity also exists to count the protection of marine areas as part of countries carbon savings under the Paris Agreement.