

# SUBMISSION ON

# Updating Aotearoa New Zealand's Approach to International Climate Change Negotiations

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**To:** Ministry of Foreign Affairs and Trade (MFAT)

**Name of Submitter:** Horticulture New Zealand

**Supported by:** NZ Asparagus Council, Strawberry Growers NZ, Summerfruit NZ

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# OVERVIEW

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## Our submission

Horticulture New Zealand (HortNZ) thanks the Ministry of Foreign Affairs and Trade (MFAT) for the opportunity to submit on the Updating Aotearoa New Zealand's Approach to International Climate Change Negotiations and welcomes any opportunity to continue to work with the MFAT Climate Change Team and to discuss our submission.

The details of HortNZ's submission and decisions we are seeking are set out in our submission below.

# HortNZ's Role

## Background to HortNZ

HortNZ represents the interests of approximately 5,500 commercial fruit and vegetable growers in New Zealand who grow around 100 different fruit, and vegetables. The horticultural sector provides over 40,000 jobs.

There is approximately, 80,000 hectares of land in New Zealand producing fruit and vegetables for domestic consumers and supplying our global trading partners with high quality food.

It is not just the direct economic benefits associated with horticultural production that are important. Horticulture production provides a platform for long term prosperity for communities, supports the growth of knowledge-intensive agri-tech and suppliers along the supply chain; and plays a key role in helping to achieve New Zealand's climate change objectives.

The horticulture sector plays an important role in food security for New Zealanders. Over 80% of vegetables grown are for the domestic market and many varieties of fruits are grown to serve the domestic market.

HortNZ's purpose is to create an enduring environment where growers prosper. This is done through enabling, promoting and advocating for growers in New Zealand.



# Executive Summary

## Key Points

1. Horticulture is already a low emissions food source, and prioritising horticultural food systems is necessary to both reduce world hunger and mitigate the impacts of climate change.
2. Environmental action such as carbon offsetting must be balanced with the need for food security, human health and wellbeing.
3. New Zealand demonstrates manaakitanga by advocating for food security, adaptation measures and climate financing for Pacific nations and peoples.

## Key Questions

This consultation asked over 80 questions. HortNZ responded to those that were most relevant, and the questions with the most important answers are listed below:

Q. 3.7	What (e.g. sectors and measures) should this global mitigation work programme focus on, and how should it prioritise focus areas?
Q. 3.14	What outcomes would you like to see internationally in relation to agricultural climate action?
Q. 3.17	What outcomes would you like to see internationally in relation to adaptation?
Q. 3.23	What outcomes would you like to see internationally in relation to climate finance?
Q. 3.33	Where do you think New Zealand can provide global leadership on forestry in the context of COP?
Q. 3.55	What outcomes would you like New Zealand to advocate for internationally in relation to just transition?
Q. 3.62	What outcomes would you like New Zealand to advocate for internationally on low-emissions technology development and transfer?

# Submission

## Discussion Questions

HortNZ's responses to specific questions from the consultation follow below.

### Section 1: What do you think New Zealand should be seeking to achieve through our participation at COP?

**Q. 1.1** How can New Zealand best use COP to advance effective and ambitious global action?

New Zealand should use COP to advocate for Pacific resilience and food security. It is also an opportunity to showcase New Zealand's success in climate change planning as an example for international action.

HortNZ's seeks that New Zealand promotes horticulture as a low emissions food sector which is key to reducing world hunger and malnutrition. We go into detail on this point in response to Q. 3.14 about agriculture and climate action.

**Q. 1.2** What areas are most critical for New Zealand to promote effective and ambitious global action at COP?

	Not important	Least important	Somewhat important	Very important	Most important
Global emissions reduction (Mitigation)					X
Increasing resilience (Adaptation)					X
Climate finance and technical support for climate action in developing countries				X	
Aligning global financial flows with the net zero transition				X	
Loss and damage			X		

Nature-positive climate action (e.g. through native ecosystems and nature based solutions, addressing the linkage between the biodiversity and climate crises)			X		
Trade policies and instruments that support climate action					X
Agricultural sector climate action					X
Circular economy and sustainable industry (e.g., reducing plastic waste, etc.)			X		
Technology, innovation and transfer of technology					X
Other (please specify below)					

**Q. 1.3** Why? Tell us more

No comment.

**Q. 1.4** How can New Zealand best leverage participation in COP to support our own low-emissions transition?

We can attract low-cost, low-emissions agricultural technology and promote New Zealand as the place to trial it. There is demand here because of the ambition of domestic policy settings.

**Q. 1.5** What areas are most critical for New Zealand to promote our domestic transition through our participation at COP?

	Not important	Least important	Somewhat important	Very important	Most important
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Insight into other countries' transition policies (e.g. on just transition, or implementation of nature-based solutions)				X	
Cooperation with other countries to support New Zealand's transition (e.g. on transport, attracting used EVs)			X		
Promoting New Zealand as a low-carbon tech proving ground/green investment destination				X	
Access for New Zealand businesses to world-leading international businesses' transition technologies and business models				X	
Export opportunities for cleantech or carbon-efficient New Zealand exporters					X
Other (please specify below)					

**Q. 1.6** Why? Tell us more?

No comment.

**Q. 1.7** If you are a business or you represent a Māori, civil society or industry organisation, are you considering participating in COP? Why/why not?

No, our organisation does not have the scale or budget to participate.

**Q. 1.8** Supporting the Pacific is a key component of our approach to COP. What do you think is important to consider as we do this, and why?

HortNZ seeks recognition of New Zealand’s strategic importance in ensuring food security for the Pacific. New Zealand provides fresh vegetables to the Pacific Islands, which, like New Zealand, are too remote to import this produce from elsewhere in the world. In 2016 for example, 76% of New Zealand’s total exported potatoes went to Fiji, and 87% of exported kumara, 82% of exported cauliflower, and 75% of exported cabbage went to the Pacific Islands.<sup>1</sup>

Agriculture and horticulture are essential to provide food for the world’s people. There is enormous potential for emissions reduction in food production, but we must not lose sight of the fact that it must remain viable to grow crops at mass scale in order to combat world hunger. That means that emissions reduction in food production must be enabled through the development of new technology and growing methods, but climate action cannot come at the expense of feeding the global population. We should be pursuing methods of reducing emissions that can enable more efficient and sustainable growing without threatening our productive capacity.

Beyond export, New Zealand can help the Pacific build its food resilience. By providing support for smallholder farmers, such as access to finance, training, and technology, we can help them adapt to climate change and increase food production, leading to more secure food systems. Smallholder farmers in the Pacific are facing decreased available arable land due to urbanisation.<sup>2</sup> Other barriers included climatic and financial risks, including little access to credit and unaffordable prices for fuel to transport goods to market.<sup>3</sup>

Global support for these small-scale growing operations can improve peoples’ access to food, especially when global supply chains are disrupted. Localising food systems may also reduce emissions through reduced freight as well as food loss in transportation. Globalised trade is still necessary, however, to feed people in countries where horticulture at-scale isn’t viable due to lack of productive soils or other necessary natural resources. The World Trade Organisation notes that trade can both increase the availability of food and allow more people to afford food through new jobs and higher incomes.<sup>4</sup>

Atoll islands do not have the capability to grow the fresh food they need to meet the nutritional requirements of their people, so New Zealand’s exports will continue to be vital for food security even if local horticultural capacity grows in island nations with more viable soils.

**Q. 1.9** Indigenous leadership: What role should New Zealand play in amplifying indigenous voices in the global climate change regime? How can we do this most effectively?

<sup>1</sup> KPMG, 2017 New Zealand’s domestic vegetable production: the growing story

<sup>2</sup> Georgeou N, Hawksley C, Wali N, Lountain S, Rowe E, et al. (2022) Food security and small holder farming in Pacific Island countries and territories: A scoping review. PLOS Sustainability and Transformation 1(4): e0000009. <https://doi.org/10.1371/journal.pstr.0000009>

<sup>3</sup> Georgeou N, Hawksley C, Wali N, Lountain S, Rowe E, et al. (2022) Food security and small holder farming in Pacific Island countries and territories: A scoping review. PLOS Sustainability and Transformation 1(4): e0000009. <https://doi.org/10.1371/journal.pstr.0000009>

<sup>4</sup> World Trade Organization. “Food security”. [WTO | Food security](#) Accessed online 05/05/23.



No comment.

**Q. 1.10** Nature-positive climate action: How should we seek to ensure our global response to climate change also improves the resilience of our native ecosystems, and avoids harm to biodiversity?

Protecting existing native forests like New Zealand's conservation estate and the Amazon Rainforest are crucial both for carbon sequestration and for protecting biodiversity. Settings in New Zealand's domestic policy, however, incentivised the quick growing pine monocultures that do little for native plants or animals and create isolation in rural communities. Plantation forestry is a quick-fix for carbon credits, but over-reliance on this mechanism may divert resources that could be better spent reducing emissions of existing activities, and investing in slower, more enduring native forest carbon sinks.

**Q. 1.11** Should New Zealand be pursuing other aims at COP not mentioned above? If so, what, and why?

No comment.

**Q. 1.12** How should we be looking ahead to the prospect of an Australian COP in 2026 to support New Zealand and Pacific interests? Should it affect how we participate in COP in the run up to 2026?

New Zealand should advocate for Pacific interests and showcase why the Pacific is a particularly important voice. The Pacific Islands are vulnerable to sea level rise and severe storms. If serious action is not taken to curb climate change, the Pacific will be on the front lines of managed retreat and taking care of climate refugees. There is also a chance to showcase impressive climate action in the region, including New Zealand's own progress toward reducing our emissions.

## **Section 2: How should New Zealand engage at COP?**

**Q. 2.1** What role do you think New Zealand should aim to play at COP? E.g. should we seek to be seen as a constructive bridge-builder, or be more prepared to be an outlier? Why?

No comment.

**Q. 2.2** Who should we be working and aligning with, and why?

New Zealand should prioritise advocating for other Pacific nations given our close strategic and cultural relationship and their vulnerability to climate change. We should also work with Australia and our other allies.

**Q. 2.3** Is New Zealand part of the right initiatives and coalitions to achieve our COP objectives? Why? Why not?

### Mostly

New Zealand does not currently have representation in the Food and Agriculture Organisation of the United Nations (FAO) whose mission is to achieve food security and defeat global hunger.<sup>5</sup> New Zealand should aim to be a global leader in sustainable agriculture that holds onto the core mission of producing food - to feed the hungry. To hold onto those dual priorities, our country needs to stay tapped into global needs and knowledge. Liaising directly with the United Nations through FAO is one pathway; New Zealand should seek to establish a regional FAO office, especially given our own struggles with food security<sup>6, 7, 8, 9</sup> and our nation's key role in providing fresh food to the Pacific Islands<sup>10</sup>.

**Q. 2.4** What should we do differently?

No comment.

**Q. 2.5** How should we give effect to our Treaty partnership with Māori in how we engage at COP?

HortNZ is supportive of active engagement with Treaty partnership and believe Māori should be integral partners in developing New Zealand's climate change policy and negotiation platforms. The Government must engage in early and continued communication with iwi/Māori partners.

In terms of New Zealand's negotiation platform, HortNZ seeks that international commitments do not limit the ability of Māori to use their land and assets in ways that are appropriate, like running a horticultural business.

**Q. 2.6** Who do you think should be represented at COP to drive the outcomes New Zealand seeks?

Rural and Māori voices as well as representatives from sustainable industry should all be included in New Zealand's negotiation team.

<sup>5</sup> [Worldwide Offices | FAO | Food and Agriculture Organization of the United Nations](#) Accessed 24/04/23.

<sup>6</sup> [The association of food security with psychological distress in New Zealand and any gender differences](#), Social Science & Medicine 2011

<sup>7</sup> Ministry of Health. (2019). *Household food insecurity among children, New Zealand Health Survey*

<sup>8</sup> New Zealand Health Survey Data. Accessed: [https://minhealthnz.shinyapps.io/nz-health-survey-2019-20-annual-data-explorer/?w\\_b6ac76b1#!/explore-topics](https://minhealthnz.shinyapps.io/nz-health-survey-2019-20-annual-data-explorer/?w_b6ac76b1#!/explore-topics)

<sup>9</sup> Rush, E., Savila, F., Jalili-Moghaddam, S., & Amoah, I. (2018). Vegetables: New Zealand Children Are Not Eating Enough. *Front. Nutr.*

<sup>10</sup> [New Zealand trade balance, exports, imports by country 2020 | WITS Data \(worldbank.org\)](#) Accessed 24/04/23.

## Section 3: Specific Negotiation questions

### GLOBAL STOCKTAKE

**Q. 3.1** What should we advocate for in the GST on mitigation?

Data collection for the GST should aim to reduce duplication and only collect information that directly serves specific goals. The primary production sectors in New Zealand have been burdened with high compliance costs, including requests for the same data from multiple government sources. The government needs to ask for data once, and only that which is necessary. Collecting data takes time away from growers' primary job - growing food to feed the world's population.

**Q. 3.2** What should we advocate for in the GST on adaptation?

A strong outcome of the Global Stocktake means that adaptation for the most vulnerable groups, particularly in the Pacific Islands, is accounted for through financial and technological support.

**Q. 3.3** What should we advocate for in the GST on financial flows?

No comment.

**Q. 3.4** Are there things we should advocate for across these pillars?

No comment.

**Q. 3.5** How should the Global Stocktake and its outcomes increase action in this critical pre-2030 decade?

No comment.

**Q. 3.6** How should the Global Stocktake outcomes feed into countries' consideration of NDC2?

Nationally Determined Contributions (NDCs) are key to global action. The Global Stocktake should inform countries' next NDCs (NDC2) which will cover their commitments from 2031-2035.

Countries submit NDCs under the Paris Agreement every five years - or they can revise them to be more ambitious anytime. NDC2 is due to be submitted in 2025.

70% of NDC's do not detail any funding for climate action in food production, despite the fact that agriculture contributes about a third of global greenhouse emissions.<sup>11</sup> NDCs should contain detailed food systems policies and funding to align policy commitments and finance with climate goals. Public financing for projects that align with these commitments can be a tool to leverage private support. This will also line up incentives amongst government departments and foster collaboration.<sup>12</sup>

New Zealand does not currently include specific finance needs for food systems in our NDC.<sup>13</sup> We, as a country, need to put our money where our mouth is – we present ourselves on the world stage as the exemplar of sustainable agriculture, but we could be an even better role model by showcasing what a budget for food systems transformation looks like.

## MITIGATION WORK PROGRAMME

Q. 3.7 What (e.g. sectors and measures) should this global mitigation work programme focus on, and how should it prioritise focus areas?

Agriculture contributes about 48% of New Zealand's greenhouse gas emissions<sup>14</sup> and Oceania has the highest per capita agricultural emissions of any continent (6.5 t CO<sub>2</sub>eq per capita).<sup>15</sup> Given the predominance of food production to our national and regional emissions, New Zealand has a vested interest in acquiring agricultural technology and best practices to reduce our contributions. In 2021, food made up 65% of New Zealand's merchandise exports.<sup>16</sup> As climate change threatens worsening world hunger<sup>17</sup>, and New Zealand produces enough food to feed over 40 million people<sup>18</sup>, our focus should be on learning how to reduce emissions from food production rather than reduce the presence of the sector. This is in line with the UNFCC Global Mitigation Work Programme for 2023, which calls for "Promoting sustainable development and understanding socioeconomic effects."<sup>19</sup> That means enabling sustainable growth of food production to both bolster the economy and

<sup>11</sup> Global Alliance for the Future of Food. *Untapped Opportunities: Climate Financing for Food Systems Transformation*. n.p.: Global Alliance for the Future of Food, 2022. Accessed 21/04/23 [climatefinancereport-english.pdf \(futureoffood.org\)](#) (p. 3)

<sup>12</sup> World Economic Forum. *Transforming Food Systems: Pathways for Country-led Innovation*. 2022. Accessed 21/04/23 [Transforming Food Systems: Pathways for Country-led Innovation | World Economic Forum \(weforum.org\)](#) (p. 14)

<sup>13</sup> Global Alliance for the Future of Food. *Untapped Opportunities: Climate Financing for Food Systems Transformation*. n.p.: Global Alliance for the Future of Food, 2022. Accessed 21/04/23 [climatefinancereport-english.pdf \(futureoffood.org\)](#) (p. 22)

<sup>14</sup> [New Zealand's emissions profile in 2019 | Ministry for the Environment](#)

<sup>15</sup> FAO. 2022. Greenhouse gas emissions from agri-food systems – Global, regional and country trends, 2000-2020. FAOSTAT Analytical Brief No. 50. Rome. Accessed 20/04/23 [Greenhouse gas emissions from agrifood systems \(fao.org\)](#) (p. 2)

<sup>16</sup> [World Development Indicators | DataBank \(worldbank.org\)](#)

<sup>17</sup> AO, IFAD, UNICEF, WFP and WHO. 2022. The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable. Rome, FAO. Accessed 21/04/23 <https://doi.org/10.4060/cc0639en> (p. 16)

<sup>18</sup> Rush, E., Obolonkin, V. Food exports and imports of New Zealand in relation to the food-based dietary guidelines. *Eur J Clin Nutr* 74, 307-313 (2020). <https://doi.org/10.1038/s41430-019-0557-z>

<sup>19</sup> <https://unfccc.int/topics/mitigation/workstreams/mitigation-work-programme#Topics-for-2023>

provide for global nutrition and wellbeing.

80% of global emissions from cultivation come from beef, dairy, and rice, and these are some of the most financially supported food products in the globe<sup>20</sup>. We should be working on other ways to provide the same nutrients to people without sacrificing atmospheric warming. Making these food production systems more efficient will not make nearly as much of a difference as becoming less reliant on them in the first place. We need a global shift toward less emissions-intensive diets, which means turning to plants more often for our proteins and nutrients.

One way to keep producing food with a far lower carbon footprint is a shift toward horticulture<sup>21</sup>. Diversification to horticulture will already save an enormous amount of greenhouse gas emissions as recognised by the Climate Change Commission<sup>22</sup>, and there are even more gains to be made with research into regenerative farming practices, soil health best practices, and alternatives or improvements to synthetic fertiliser.

In the global mitigation work programme, New Zealand should argue for investment in research into regenerative farming practices and development of agricultural technology that makes it easier to scale up horticulture, a lower emissions way to feed people than other food production methods.

One of UNFCCC's Global Mitigation Work Programme Topics for 2023 is "Addressing financial, technological and capacity-building needs in this area, such as through international cooperation, including with non-Party stakeholders, and provision of support to developing countries"<sup>23</sup>. In line with that directive, New Zealand should support horticultural growth in developing nations for local food security, especially with the risks to supply chains associated with climate change<sup>24</sup>. For instance, New Zealand could leverage off our relationships built through the Recognised Seasonal Employer (RSE) scheme to support horticulture in participating Pacific Island countries.

**Q. 3.8** How should New Zealand engage in this programme to support global action?

No comment.

**Q. 3.9** How should New Zealand engage in this programme to support domestic action?

New Zealand should encourage international companies to see New Zealand as a

<sup>20</sup> H. Galt, et al., "Shifting Finance Towards Sustainable Land Use: Aligning Public Incentives with the Goals of the Paris Agreement," (2021). Accessed 21/04/23 <https://climatefocus.com/wp-content/uploads/2022/06/ShiftingFinanceMainReport.pdf> (p. 34)

<sup>21</sup> <https://ourworldindata.org/grapher/ghg-kcal-poore> Accessed 24/04/23.

<sup>22</sup> Climate Change Commission. 2021. Ināia tonu nei: a low emissions future for Aotearoa. Accessed 20/04/23 [Ināia tonu nei: a low emissions future for Aotearoa » Climate Change Commission \(climatecommission.govt.nz\)](https://climatecommission.govt.nz/ināia-tonu-nei-a-low-emissions-future-for-aotearoa).

<sup>23</sup> <https://unfccc.int/topics/mitigation/workstreams/mitigation-work-programme#Topics-for-2023>

<sup>24</sup> De Guzman, Chad. Climate Crisis Is Driving Food Nationalism and Changing Global Trade. Time Magazine (2022). <https://time.com/6195984/climate-change-food-security-trade/> Accessed 24/04/23.

launch pad for low emissions agricultural technology. New Zealand provides a small ecosystem to test in within a country that has the policy settings to incentivise climate action. Our growers are more than open to innovation and experimentation as long as it is financially viable.

**Q. 3.10** What relation, if any, should this have to New Zealand's Emissions Reduction Plan?

The Emissions Reduction Plan includes a key action to transition to lower emissions land uses and practice. Supporting land use diversification to lower emissions land uses such as horticulture is critical to New Zealand achieving our 2050 emissions reduction targets within the Climate Change Response Act.

The opportunity horticultural expansion provides for reducing emissions was canvassed in the Climate Change Commission's advice to Government on the first Emissions Reduction Plan. This advice suggested conversion of 2,000 ha to horticulture annually between 2025 and 2035 in its demonstration pathway (and noted that land use change would need to play a larger role than this if new technologies to reduce livestock emissions do not eventuate). Their draft advice on the second Emissions Reduction Plan calls for 14,000 ha increase of horticulture from 2020 until 2030.<sup>25</sup>

The emissions reduction plan includes transition to lower emissions systems and land uses, however this action appears to be focused on making systems changes to pastoral farming, rather than exploring ways of supporting and enabling land use change to horticulture. We see this as a missed opportunity. While regenerative farming may offer opportunities on the margin to reduce emissions from pastoral farming, much more significant emissions reductions could be achieved through land use change, and unlike many of the initiatives within the emissions reduction plan, the emissions reductions are certain.

## **NATIONALLY DETERMINED CONTRIBUTIONS**

**Q. 3.11** NDCs are nationally determined, however are there processes or elements it would be desirable for all countries to focus on in the preparation of their NDC2?

NDCs should include quantifiable investment and progress toward lowering agricultural emissions. If all countries commit to this, trade barriers will not be necessary to prevent carbon leakage from imported foods that are not subject to New Zealand's climate policies. NDCs already consider the proportion of responsibility for climate action that is fair in each country, so this is a more equitable solution than blanket market controls on unsustainable products.

NDC's should also include commitments to reduce international maritime emissions

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<sup>25</sup> Climate Change Commission, *Full report: 2023 Draft advice to inform the strategic direction of the Government's second emissions reduction plan (April 2023)*. Accessed online 04/05/23. [Full report: 2023 Draft advice to inform the strategic direction of the Government's second emissions reduction plan \(April 2023\)](#) » [Climate Change Commission \(climatecommission.govt.nz\)](#) (p. 39)

by establishing green shipping corridors. As the “food miles” conversation becomes more prevalent, New Zealand will be at a disadvantage in its trade with Europe due to the distance, unless we can access greener ways of transporting product. International commitment will accelerate green shipping opportunities through targeted investment. For this transition to happen, international shipping companies need to build more boats that can use green fuel rather than diesel.

Just slowing down the boats would be unsuccessful for horticultural trade because fruit and vegetables have a limited shelf life. From the moment the product is harvested, the countdown begins to get that produce to the consumer at the right ripeness. Instead, we need to invest in green energy alternatives to power shipping and green shipping corridors will consolidate that effort on high value supply chains.

Moving forward, horticulture exporters will be paying into multiple emissions trading schemes in New Zealand and the European Union, adding cost and reducing the value of New Zealand products. This financial pressure will leave less money left over for the sector to invest in green tech innovation. International cooperation on green shipping can lessen some of these concerns.

**Q. 3.12** How should this link to the need to urgently reduce emissions in this critical decade, i.e. pre-2030?

We cannot rely on planting native forests to rapidly reduce emissions in this critical timeframe because it will simply take too long for their sequestration potential to be realised. Biodiversity goals cannot override the need for urgent action but planting the cheapest possible trees (pine) in mass monocultures has negative impacts, especially in the wake of climate disasters. New Zealand needs to look no further than the slash after Cyclone Gabrielle for evidence of this. The Climate Change Commission’s draft advice on the Second Emissions Reduction Plan calls for a renewed focus on reducing existing emissions rather than relying on offsetting.<sup>26</sup> If we truly care about reducing emissions as a country, we need to invest money, and quickly, in rapidly decarbonising energy, industry, and transportation rather than looking to offsets.

**Q. 3.13** Should New Zealand be advocating for the implementation of NDCs to also promote biodiversity benefits – and if so, how? If yes, how?

**No**

While biodiversity is a desirable co-benefit of climate action and a strong argument against monoculture carbon farming, there are many strong mitigation and adaptation strategies that are not connected to biodiversity. Biodiversity should be a part of the discussion, but not a required consideration for every type of action in

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<sup>26</sup> Climate Change Commission, *Full report: 2023 Draft advice to inform the strategic direction of the Government’s second emissions reduction plan (April 2023)*. Accessed online 04/05/23. [Full report: 2023 Draft advice to inform the strategic direction of the Government’s second emissions reduction plan \(April 2023\)](#) » [Climate Change Commission \(climatecommission.govt.nz\)](#)

NDCs. For instance, highly productive land that is well-suited to growing fruits and vegetables is a valuable and limited resource that should be prioritised for feeding humans rather than planting native forests. On the other hand, degraded or low-quality soils may benefit greatly from native plantings that also support biodiversity in animal life. Balancing competing priorities and sustainable development goals requires considering the highest and best use of the land.

## AGRICULTURE

**Q. 3.14** What outcomes would you like to see internationally in relation to agricultural climate action?

HortNZ would like to see food security and reducing emissions to continue to be a dual focus for climate action, where these two priorities are held equally without one compromising the other. The cover decision for COP 27 was the first ever to mention food, recognising “the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change.”<sup>27</sup> Food is simultaneously a necessity for human survival, a possible casualty of climate change, and a sector that can be leveraged to reduce greenhouse gas emissions. On the international stage, New Zealand should advocate for emissions reduction through land use change for health and climate impacts.

### 3.14.1 Food Security and Human Health

Zero hunger is the second United Nations sustainable development goal, and good health and well-being is the third.<sup>28</sup> There is a strong link between climate action and human health particularly regarding food security and hunger. New Zealand needs to be a voice for showing how these priorities can work in tandem.

### 3.14.2 Adaptation for Food System Resilience

Sustaining productive food security through a changing climate will be critical and the elevation of impacted food security as a risk is essential.

There is a need for adaptation to protect and enhance global food supply. The IPCC *Special Report on Climate Change and Land* asserts that, “Observed climate change is already affecting food security through increasing temperatures, changing precipitation patterns, and greater frequency of some extreme events ... Food security will be increasingly affected by projected future climate change.”

In New Zealand, we have a national food production system that relies on growing vegetables and fruit in pockets of highly productive land, with good climate and access to freshwater. International attention needs to be called toward protecting elite soils and rehabilitating degraded ones to grow more food and sequester carbon.<sup>29</sup>

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<sup>27</sup> Sharm el-Sheikh Implementation Plan. 2022. Accessed 21/04/23 [COP27 AUV 2 \(unfccc.int\)](https://unfccc.int/COP27/AUV_2) (p. 1)

<sup>28</sup> [THE 17 GOALS | Sustainable Development \(un.org\)](https://www.un.org/sustainabledevelopment/)

<sup>29</sup> [Soil Carbon Sequestration | FAO SOILS PORTAL | Food and Agriculture Organization of the United Nations](https://www.fao.org/soils-portal/soil-carbon-sequestration/) Accessed 24/04/23.



Supply chain disruptions from global events like the COVID-19 pandemic, the war in Ukraine, and extreme weather events will further shake our planet's food supply. Addressing this, the COP 27 cover decision also stressed that the challenges facing global food systems including geopolitical dynamics "should not be used as a pretext for backtracking, backsliding or de-prioritizing climate action".<sup>30</sup> HortNZ agrees that climate action in food is more pressing than ever.

### 3.14.3 Reducing Agricultural Emissions

The Office of the Minister for Climate Change report *Update to the Climate Change Negotiations* says, "Currently, there are few practical options to reduce agricultural emissions without reducing production."<sup>31</sup> HortNZ disagrees. There is the option to diversify to lower emissions agricultural products, especially low emissions horticulture.

Research has illustrated the connection between eating patterns, climate change and health outcomes and eating more plant-based foods and minimising food waste were some of the most important ways individuals could reduce their personal climate footprint, while also having health gains and health system savings.<sup>32</sup> This research reported annual diet-related emissions reductions of between 4 percent (following New Zealand Dietary Guidelines) to 42 percent (waste free vegan diet), the latter being equivalent to one-fifth of the current emissions reduction needed to meet New Zealand's commitment under the Paris Climate Agreement.

Diversification to horticulture presents an opportunity to reduce emissions while increasing food production. Plant based balanced diets are recognised as key mitigation strategy in the IPCC 6th Assessment Report.<sup>33</sup> In New Zealand, there are 1,000,000 ha of land that could potentially be converted to horticulture to meet increased demand for plant-based foods. If this land was converted to horticulture, it would be as effective at reducing New Zealand's agricultural emissions as a methane vaccine.<sup>34</sup>

Compliance and mitigation costs need to align with scale and impact when we discuss agricultural emissions. It is otherwise inefficient and could limit opportunities for positive change. For instance, undue regulatory pressure is already preventing the expansion of vegetable growing from keeping up with population growth in New Zealand, despite horticulture being a low emissions industry. This is predicted to result in increased cost for consumers, with tangible health consequences through reduced access to nutritious food.

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<sup>30</sup> Sharm el-Sheikh Implementation Plan. 2022. Accessed 21/04/23 [COP27 AUV 2 \(unfccc.int\)](https://unfccc.int) (p. 2)

<sup>31</sup> Office of the Minister for Climate Change, Chair Cabinet Business Committee (CBC). *Update to the Climate Change Negotiations Mandate*. 1 March 2022. <https://www.mfat.govt.nz/en/media-and-resources/proactive-release-cop26-new-zealands-objectives-and-outcomes/> (p. 41 of pdf)

<sup>32</sup> Drew, J et al. (2020) 'Healthy and Climate-Friendly Eating Patterns in the New Zealand Context'. *Environmental Health Perspectives* <https://ehp.niehs.nih.gov/doi/full/10.1289/EHP5996>

<sup>33</sup> <https://www.ipcc.ch/report/ar6/wg2/>

<sup>34</sup> Dorner, Z et al. (2018) Land-use Change as a Mitigation Option for Climate Change. Report to the Biological Emissions Reference Group (Project No. 18398) <https://www.mpi.govt.nz/dmsdocument/32140/direct> Accessed 24/04/23. (p. 12)

#### 3.14.4 Covered Cropping

It is critical that food system decarbonisation is achievable without disrupting production and supply chains. For example, the glasshouse sector is at risk of becoming economically unviable due to ETS costs. Strategic investment in decarbonised heating systems with government support is necessary, so we can continue to eat crops like tomatoes and courgettes in New Zealand.

Global trends suggest that covered cropping will have an increasingly important role to play in feeding people. An increase in covered cropping will be essential to adapt the food production system to the changing climate while still producing enough food in a way that also uses less water and nutrients and mitigates the risks associated with unpredictable climatic events. A 2019 Intergovernmental Panel on Climate Change report into land use stated, "The stability of food supply is projected to decrease as the magnitude and frequency of extreme weather events that disrupt food chains increases".<sup>35</sup> Covered cropping can reliably deliver high yields of quality produce using less land and water and shielding the produce from wind and rain.

#### 3.14.5 Sequestration

We recognise that considering sequestration as part of our international obligations requires national accounting. We have to count trees and vines planted over a certain time period as well as those that have been lost over the same time period. If sequestration from a greater range of on-farm trees was counted, including orcharding and kiwifruit vine growing, there will be some practical threshold below which New Zealand cannot reliably account for changes in sequestration as part of our international accounting obligations.

It is worthwhile undertaking research into the level of sequestration achieved by horticultural trees and vines of various sizes and scales and the degree to which accounting for the change in sequestration at these scales is possible.

However, regardless of whether sequestration achieves a threshold that can be accounted for as part of New Zealand's international accounting obligations, horticultural sequestration is still occurring and has benefits and should be recognized and encouraged.

Improved sequestration can be achieved by mulching prunings, incorporating plant residue into soils, and planting perennial cropland, shelterbelts and riparian margins.

On the international stage, New Zealand should advocate for emissions reduction through land use change for health and climate impacts.

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<sup>35</sup> [IPCC, 2019: Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems](#)

### 3.14.6 Best Practice

Better soil management has the potential offset and sequester one-fifth of global agricultural emissions.<sup>36</sup> An international commitment to sharing best practice could have a huge impact in this area.

### 3.14.7 Carbon Leakage and Industry Assurance

Under New Zealand's current climate change policies, a higher emissions price is being paid by New Zealand food producers compared to overseas producers who import their goods. Growers are concerned about the risk of imported products, not subject to climate change policies as robust as New Zealand's, displacing New Zealand grown products in the domestic market.

Without international uptake of emissions reduction in food production, this dynamic known as "carbon leakage" will cause perverse incentives to buy food from countries taking less action toward sustainable agriculture.

In addition, importing fresh produce to New Zealand and the Pacific at scale is not viable because of our geographic isolation. Transportation times cut into the shelf life of fresh food. The more economically unviable it becomes to grow fruits and vegetables in New Zealand, the more lower nutrition, longer shelf-life products we'll have to import to make up the caloric needs of the population.

Some markets are already shifting to require imports to meet certain environmental standards. The European Green Deal requires NZ exporters to show they are subject to effective climate change policy while trade policies make it easier to sell kiwifruit and apples, incentivising and rewarding environmental action. European supermarkets are also starting to require products to prove their carbon footprint.

One way to make these requirements consistent globally is through credible assurance and carbon-footprint standards.

International assurance schemes can give consumers, governments, and other interested parties certainty that their food was produced in line with best practice related to climate change. Assurance frameworks are important in ensuring robust reporting and certainty around emissions reduction actions. These schemes have the experience and grower base to introduce certified carbon footprints.

Global Good Agricultural Practice (G.A.P.)<sup>37</sup> and its region-specific spinoffs like NZ G.A.P. can be used to certify that growers are taking the measures needed to minimise emissions, nitrogen runoff, or other undesirable environmental effects. Supermarkets in New Zealand already rely on G.A.P. certification to source their produce which drives compliance. Industry assurance programmes can leverage off market requirements for lower-carbon products to deliver regulatory outcomes.

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<sup>36</sup> World Economic Forum. *Transforming Food Systems: Pathways for Country-led Innovation*. 2022.

Accessed 21/04/23 [Transforming Food Systems: Pathways for Country-led Innovation | World Economic Forum \(weforum.org\)](https://www.weforum.org/publications/transforming-food-systems-pathways-for-country-led-innovation) (p. 7)

<sup>37</sup> [about us \(globalgap.org\)](https://www.globalgap.org/about-us) Accessed 26/04/23.

Product labelling is an option outside of trade agreements to manage the risk of carbon leakage through empowering consumers. Products can be labelled with their industry assurance programme logo to show consumers that their purchase is meeting standards. Country of origin labelling is another crucial instrument in supporting consumers choices. We would like to see this extended to see more extensive use of certification of domestic and imported products in retail.

### 3.14.8 *Economic Opportunity*

New Zealand can leverage how sustainable our primary production sectors already are to gain access to new international markets.

With international diets potentially changing to include more plant-based foods, there is an opportunity for New Zealand to expand into new products. We already have a successful process industry that exports processed vegetables and fruit. There may be opportunities to expand this sector particularly if we can develop processed and lightly processed products that are unique or desirable, for example high value nutrition foods. Currently there is a National Science Challenge looking into opportunities for foods with high-value nutrition. One of the National Science Challenge projects is looking at kumara as a first food for babies. New Zealand already has reputation as a producer of food for babies. This project presents an opportunity to build on that reputation with a highly nutritious plant-based food for babies that also presents an opportunity to build on traditional Māori knowledge.

**Q. 3.15** How do you think Māori rights and interests in agriculture and the land sector should be advocated for at COP?

Māori have significant investment in horticulture, and the promotion of horticulture as a low emissions food production sector will support their success.

Food is a fundamental human need, which means that we will always need food production. We don't know what new food production techniques will be developed or adapted in the future, and we don't want to limit peoples' ability to grow in the future if policies are based on outdated assumptions about horticulture. Māori are well positioned to be leaders in regenerative agriculture and other developing spaces. That work will only be possible if there is flexibility in land use.

There's also great potential to develop indigenous varieties of food crops which are well suited to local environments. The Global Alliance for the Future of Food writes that in agriculture, "Production has moved away from native and indigenous varieties toward a narrower scope of products, in the process eroding the extensive and sophisticated local agricultural knowledge once present and weakening food systems

resilience against climate change and other crises as dependence on just a few commodities has increased.”<sup>38</sup> Reversing this trend requires more targeted funding and science support for indigenous food research and implementation.

**Q. 3.16** Recognising New Zealand’s domestic action to address agricultural emissions, should we be hard lined in negotiations by requiring text to recognise that all countries should be seeking to reduce their agricultural emissions?

Yes, other countries need to take on this responsibility. While NZ produces enough food to feed 40 million people<sup>39</sup>, our agricultural economy is still smaller than the big players like the United States. We do what we can, but it will take big action by big players for the big change that is required.

## ADAPTATION

**Q. 3.17** What outcomes would you like to see internationally in relation to adaptation?

Natural hazards, such as a significant drought, can impact on both agricultural and horticultural industries by affecting planting, growth and annual yields collected by growers. The horticulture industry welcomes adaptation efforts that maintain growers’ ability to produce food in a changing climate. Internationally, we must build resilience within the food system to feed a growing population.

The Paris Agreement highlights the importance of food production and food security in the context of climate action, recognising the “fundamental priority of safeguarding food security ...” and noting the need to adapt, foster resilience and lower emissions in a manner that does not threaten food production.<sup>40</sup>

Global adaptation strategies should:

- consider protecting the world’s existing food baskets from climate impacts through defences like flood protection;
- and identify opportunities for food production in areas where the climate is becoming more favourable for horticulture due to warming temperatures and extended growing seasons.

When we grow food locally, we ensure our ability to feed our own people, a goal that should be of utmost importance to any society. Local food production is a crucial

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<sup>38</sup> Global Alliance for the Future of Food. *Untapped Opportunities: Climate Financing for Food Systems Transformation*. n.p.: Global Alliance for the Future of Food, 2022. Accessed 21/04/23 [climatefinancereport-english.pdf \(futureoffood.org\)](#) (p. 15)

<sup>39</sup> Rush, E., Obolonkin, V. Food exports and imports of New Zealand in relation to the food-based dietary guidelines. *Eur J Clin Nutr* 74, 307-313 (2020). <https://doi.org/10.1038/s41430-019-0557-z>

<sup>40</sup> Paris Agreement. Nov 2015. Accessed 19/04/23. [Paris Agreement English \(unfccc.int\)](#) (p. 1)

strategy for climate adaptation as weather changes will disrupt agricultural production and supply chains in other parts of the world.<sup>41</sup> It's also a mitigation strategy to reduce emissions from importing food products into the country.

Horticulture is reliant on highly productive land and infrastructure (transport networks, power, water etc) that are vulnerable to impacts of climate change in coastal and flood-prone areas. Growers need governments to maintain and upgrade the flood protection infrastructure to preserve elite soils and existing growing operations. They also need the skills training, financial incentives, guidance and knowledge to adapt to a changing climate.

### 3.17.1 Risk Accounting

Governments and industry alike need to properly account for the risk of extreme weather and flooding events heightened by climate change. For instance, it may be expensive to maintain flood protection infrastructure now but spending that money upfront will save even more money in disaster recovery later. Governments should be calculating the real costs of delaying maintenance of flood protection given climate projections as part of their infrastructure planning and budgeting processes. This is particularly relevant in New Zealand in the wake of Cyclone Gabrielle.

**Q. 3.18** Are there any specific elements New Zealand should advocate for as a part of the work programme on the global goal on adaptation this year?

No comment.

**Q. 3.19** What role should New Zealand play in advocating internationally for indigenous-led/co-designed approaches to local adaptation needs?

No comment.

**Q. 3.20** How could this global decision influence New Zealand's domestic action on adaptation?

### 3.20.1 Transportation

Transportation infrastructure is critical to adaptation action to make sure that our food system still works in times of crisis, and transportation also presents an opportunity for mitigation efforts.

An efficient roading network means less emissions and manageable costs for freight operators. Increased freight times due to congested networks means a significant cost increase. There is a huge cost component which is passed on to consumers with

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<sup>41</sup> De Guzman, Chad. Climate Crisis Is Driving Food Nationalism and Changing Global Trade. Time Magazine (2022). <https://time.com/6195984/climate-change-food-security-trade/> Accessed 24/04/23.

higher food prices.

Extreme weather events are putting pressure on already stressed networks. Gisborne is a region that has had a number of extreme rain events which has caused flooding and road closures. It is extremely difficult to remove fresh produce from the region to market when there is not the roading infrastructure to support delivery.

There are several climate change projection reports<sup>42</sup> on infrastructure which provide useful information on impacts to infrastructure, particularly around coastal areas. Real time impacts on infrastructure will enable growers to plan.

Adapting to climate change impacts will be critical to support a resilient transport network. On-farm vehicles, including light commercial vehicles (e.g., utes) and machinery for cultivation and harvest are important to growers and while alternatives are available in some areas (e.g. forklifts) this is not the case for other types. Beyond the orchard gate, trucks are frequently used to transport fruit and vegetables to New Zealand consumers or ports. Some growers have their own truck fleets.

The sector is particularly reliant on trucks as a mode of transport between the orchard/farm and packhouse, and/or processing facility and port. Due to the distributed nature of horticulture and the perishability of fresh product - this creates limitations around the use of rail and coastal shipping (particularly for domestic distribution). Airfreight transportation is used for fruit that have a short shelf life. However, there could also be strategic planning opportunities which support mode shift, where the location is appropriate - e.g. A rail hub near Pukekohe connecting to Auckland and Tauranga Ports would significantly reduce road freight movements through Auckland.

There is also an opportunity to incentivise electric vehicles and for New Zealand to be an early adopter of decarbonised trucking. That will require significant government investment in charging infrastructure.

**Q. 3.21** How can consideration for biodiversity be built into the global goal and framework for adaptation?

Shelterbelts, rows of trees or shrubs that protect crops from wind and weather, are one way biodiversity is incorporated into fruit and vegetable growing systems as a form of adaptation.

**Q. 3.22** What role could New Zealand play in advocating internationally for adaptation actions that avoid harm or that protect or enhance biodiversity and native ecosystems?

### 3.22.1 Biosecurity

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<sup>42</sup> <https://www.lgnz.co.nz/assets/Uploads/d566cc5291/47716-LGNZ-Sea-Level-Rise-Report-3-Proof-FINAL-compressed.pdf>  
<https://environment.govt.nz/assets/Publications/Files/Climate-change-projections-2nd-edition-final.pdf>

A changing climate is expected to alter New Zealand's biosecurity risk<sup>43</sup>. New Zealand's temperate climate means that some tropical and sub-tropical high-risk biosecurity threats are currently unable to establish here. A warmer climate would likely mean that some of these unwanted pests could permanently establish in New Zealand in the future.

As well as an increased threat from new pests, it is possible that 'sleeper' pests, pathogens and weeds that are already present in New Zealand, could become much more problematic under warmer temperatures. Incursions of new biosecurity threats and the emergence of damage from existing 'sleeper' pests both present a significant risk to the future success of the horticulture industry and domestic biodiversity. Access to tools and capability will be required to respond to these challenges.

HortNZ would like to ensure that access to crop varieties that are resistant to pests, diseases and adverse environmental conditions is captured in this concept of resilience. A focus on controlling invasive species is important, but so is enabling the use of growing systems and plant varieties that make crops less susceptible to pests.

## CLIMATE FINANCE

**Q. 3.23** What outcomes would you like to see internationally in relation to climate finance?

Agriculture is responsible for one third of global greenhouse gas emissions, but only 3% of climate finance is dedicated to the sector.<sup>44</sup> This is a massive, wasted opportunity to reduce emissions through transforming food systems with climate financing.<sup>45</sup> In addition, there's room to align work in this space to achieve Sustainable Development Goals 2 and 3 to reduce world hunger and improve human health. Right now, high emissions low nutrition foods receive far more financial support than fruits and vegetables.<sup>46</sup> According to the Global Alliance for the Future of Food, "In the EU alone, between EUR 28.5 to 32.6 billion (USD 28.56 to 32.67 billion) goes toward livestock farms or producing fodder for livestock every year, eventually reducing the price of these goods when they reach the consumer".<sup>47</sup> New Zealand should be arguing against these subsidies on a global scale, as they reinforce a food system that may not be sustainable. New Zealand comes to the global stage as a

<sup>43</sup> <https://www.mpi.govt.nz/dmsdocument/10979-Effects-of-climate-change-on-current-and-potential-biosecurity-pests-and-diseases-in-New-Zealand>

<sup>44</sup> Global Alliance for the Future of Food. *Untapped Opportunities: Climate Financing for Food Systems Transformation*. n.p.: Global Alliance for the Future of Food, 2022. Accessed 21/04/23 [climatefinancereport-english.pdf \(futureoffood.org\)](#) (p. 2)

<sup>45</sup> Global Alliance for the Future of Food. *Untapped Opportunities: Climate Financing for Food Systems Transformation*. n.p.: Global Alliance for the Future of Food, 2022. Accessed 21/04/23 [climatefinancereport-english.pdf \(futureoffood.org\)](#) (p. 3)

<sup>46</sup> FAO, IFAD, UNICEF, WFP, and WHO. "The State of Food Security and Nutrition in the World 2022: Repurposing Food and Agricultural Policies to Make Healthy Diets More Affordable," (2022). Accessed 21/04/23 <https://www.fao.org/3/cc0639en/cc0639en.pdf> (p. xv)

<sup>47</sup> Global Alliance for the Future of Food. *Untapped Opportunities: Climate Financing for Food Systems Transformation*. n.p.: Global Alliance for the Future of Food, 2022. Accessed 21/04/23 [climatefinancereport-english.pdf \(futureoffood.org\)](#) (p. 16)



credible source on sustainable meat and dairy production. Food products should be able to compete fairly in the global market on their climate action, but agricultural subsidies in some countries tip the scale toward high emissions products.

We need to reform financial incentive systems to reward climate action in food production, including producing healthy food, diversifying to plant-based protein sources, regenerative agriculture, and strengthening local food systems.<sup>48</sup> Financing could be conditional on environmental criteria, such as sustainability-linked loans and insurance products. Those criteria should look at the food system as whole rather than comparing apples to apples within one industry – otherwise, sectors that are already producing fewer emissions may bear undue burden.

New Zealand needs to make sure its funding and support directed to agriculture does not counteract its climate action, and climate-directed finance for food systems is proportionate to expected impact. We should suggest that other countries do the same.

**Q. 3.24** What do you think New Zealand should do to support climate finance being accessible and effective for the Pacific?

The Office of the Minister for Climate Change states that NZ will, “help to establish resilient, low-emissions food systems through our aid programme investments in partner countries” through the Global Research Alliance on Agricultural Greenhouse Gases (GRA).<sup>49</sup> If low emissions food systems are the priority, calling out horticulture directly as being the most effective sector to encourage would allow for more direct engagement with our industry and associated groups.

**Q. 3.25** What kind of funding arrangements for addressing loss and damage from climate impacts do you think New Zealand should support?

No comment.

**Q. 3.26** What features would you like to see in the new collective quantified goal on climate finance?

No comment.

**Q. 3.27** How would you like to see New Zealand use COP to support broader reform in the financial system and the redirection of financial flows to align with the goals of the Paris Agreement?

<sup>48</sup> Global Alliance for the Future of Food. *Untapped Opportunities: Climate Financing for Food Systems Transformation*. n.p.: Global Alliance for the Future of Food, 2022. Accessed 21/04/23 [climatefinancereport-english.pdf \(futureoffood.org\)](https://www.futureoffood.org/climatefinancereport-english.pdf) (p. 7-8)

<sup>49</sup> Office of the Minister for Climate Change, Chair Cabinet Business Committee (CBC). *Update to the Climate Change Negotiations Mandate*. 1 March 2022. <https://www.mfat.govt.nz/en/media-and-resources/proactive-release-cop26-new-zealands-objectives-and-outcomes/> (p. 41 of pdf)

No comment.

**Q. 3.28** How do you think New Zealand can use COP to support the alignment of financial flows in our own country with the Paris Agreement and our climate change targets?

No comment.

## **LOSS AND DAMAGE**

**Q. 3.29** How should New Zealand promote successful operationalisation of the Santiago Network?

No comment.

**Q. 3.30** How do you think we can seek to ensure the Santiago Network delivers effective support for the Pacific?

No comment.

**Q. 3.31** Outside of the Santiago Network, what should New Zealand be advocating for on loss and damage, including through the Warsaw Implementation Mechanism (WIM) on loss and damage?

No comment.

## **FORESTRY**

**Q. 3.32** What outcomes would you like to see internationally in relation to forest climate action in the context of COP?

No comment.

**Q. 3.33** Where do you think New Zealand can provide global leadership on forestry in the context of COP?

New Zealand's experiments in carbon farming through forestry can serve as a case study for the negative externalities of this type of climate change mitigation. Our country's forestry has isolated rural communities and done little for native biodiversity due to perverse policy incentives that encourage pine monocultures.

The incentives within New Zealand's Emissions Trading Scheme (ETS) have led to increased forestry planting, and the averaging method has supported logging of plantation forest. The current ETS forestry settings incentivise exotic forests. Most

plantation forestry is located on the less productive farmland primarily used for meat production. The National Policy Statement for Highly Productive Land (NPS-HPL) does not, however, restrict plantation forestry even on the most highly productive land suitable for horticultural production. The return on plantation forestry with carbon credits exceeds the return from process vegetable crops. The NPS-HPL and the ETS settings have no regard to food security.

Offset has an important part to play in managing the impacts of emissions. The horticulture sector is not opposed to the use of forestry for offset, but we consider that alongside the carbon price there is the need for strong regulation to ensure that environmental effects are managed and that the price of the carbon offset does not distort land use patterns such that low emissions food production is replaced by carbon farming.

It is also important that the externalities of carbon forestry in upper catchments, associated with slash movement and deposition in floods, are not borne by horticultural production on highly productive land on flood plains. Cyclone Gabrielle, which swept a torrent of forestry slash onto orchards and vegetable growing land, as well as other businesses and homes, in Gisborne and the Hawke's Bay was attributable to forestry practices that leave organic material on the ground in a push for efficiency. Pine forests were initially planted in New Zealand in response to the erosion caused by land clearance for pastoral farming. The problem is that when those pine forests reach maturity, they are cleared all over again when the lumber is harvested, once again making the land vulnerable to erosion.<sup>50</sup> Forestry companies should be responsible for evaluating the downstream effects of their work, including erosion modelling and disaster plans for major flooding events. They should also be held accountable for the negative externalities of offsetting.

Our 2050 net-zero greenhouse gas emissions targets require us to meet net zero in 2050 and every year after that. Sequestration from plantation forestry is a necessary short-term stopgap. The current policy settings, however, risk locking in emissions from pastoral farming and locking in our dependency on offset from plantation forestry rather than making positive, transformative change to land use in New Zealand.

All of these experiences make New Zealand a key voice to talk through what works and what doesn't when it comes to offsetting with plantation forestry. We should encourage the planting of native forests rather than the cheapest monoculture by presenting the effects for ecosystem health, longer term sequestration, and bolstering identity through pride in a country's nature. We should also highlight that planting forests should be balanced with protecting highly productive land for food production, and responsible forestry practices are required to prevent damage from slash and erosion. Environmental action should not come at the expense of human health and wellbeing, especially since those two goals can work in tandem with careful planning.

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<sup>50</sup> [Cyclone Gabrielle triggered more destructive forestry 'slash' - NZ must change how it grows trees on fragile land | RNZ News](#)

**Q. 3.34** What do you think New Zealand’s position should be on the role of forests for climate change mitigation, including within NDCs and the international purchase of forest carbon credits?

No comment.

**Q. 3.35** How do you think Māori rights and interests in forestry and the land sector should be advocated for at COP?

International commitments should not limit peoples’ options for how to use their own land in appropriate manners.

New Zealand should also advocate for the importance of indigenous forests outside of plantation forestry. Those forests require care that requires resourcing, whether in public or Māori ownership. Biodiversity is an important priority that should be considered alongside climate change.

### **INTERNATIONAL COOPERATION ON MITIGATION**

**Q. 3.36** How should New Zealand promote environmental integrity and ensuring that only real and additional emissions reductions and removals can be used towards NDCs?

No comment.

**Q. 3.37** How should New Zealand promote environmental integrity and ensuring that only real and additional emissions reductions and removals can be used towards NDCs?

No comment. This question is the same as the one above.

**Q. 3.38** How should New Zealand ensure that sustainable development co-benefits (such as where funding mitigation outcomes also improves access to affordable energy for communities in the developing country partner) are mandated or weighted appropriately?

No comment.

**Q. 3.39** What should New Zealand prioritise when engaging in the negotiations to support our access to sources of emissions reduction units with high environmental integrity?

No comment.

### **GENDER AND CLIMATE CHANGE**

**Q. 3.40** How should New Zealand advocate for gender equality and women’s empowerment in the context of climate change at the UNFCCC?

Around the world, women 10% more likely to be “moderately or severely food insecure”.<sup>51</sup> We should advocate for support for smallholders and subsistence farmers who are often women.

**Q. 3.41** What concrete actions can New Zealand take to advance gender-responsive climate policies and actions internationally?

No comment.

## **LOCAL COMMUNITIES AND INDIGENOUS PEOPLES PLATFORM**

**Q. 3.42** How should Aotearoa engage with the LCIPP?

No comment.

**Q. 3.43** What can we do to support and empower Māori to engage in the work of the LCIPP?

If the Government wants to genuinely engage with Māori on an international project like the LCIPP, they need to go out to marae and build connections with communities face to face. It is much easier to bring people in if you can present meaningful opportunities and show why it will be a mutually beneficial partnership, not just a box-ticking exercise.

**Q. 3.44** How can we better connect the work of the LCIPP at the international level to grass-root indigenous climate action, and specifically, what iwi, hapū and Māori communities are doing on climate domestically?

For Māori representation to be present at that international level, the Government needs to support the building of that relationship. Grassroots connection means going out for face to face, kanohi ki te kanohi, to build real connections. To reach people at the grassroots level, it isn’t enough to meet with leaders in focus groups in Wellington. Policymakers need to meet people where they are – go out into communities, talk to the people working on the ground level. Government representatives need to see the context and implications of what they’re asking in physical proximity.

## **HUMAN RIGHTS AND CLIMATE CHANGE**

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<sup>51</sup> World Economic Forum. *Transforming Food Systems: Pathways for Country-led Innovation*. 2022. Accessed 21/04/23 [Transforming Food Systems: Pathways for Country-led Innovation | World Economic Forum \(weforum.org\)](https://www.weforum.org/publications/transforming-food-systems-pathways-for-country-led-innovation/) (p. 7)

**Q. 3.45** Human rights is a cross-cutting issue. How do you think New Zealand should advocate for countries to respect, promote and consider their human rights obligations when taking action to address climate change?

“The right to adequate food” is one of the human rights identified in the Office of the Minister for Climate Change’s Proactive Release of the *Update to the Climate Change Negotiations*.<sup>52</sup> New Zealand should advocate for the right to healthy food – climate action should support, not hinder, peoples’ ability to access nutritious, local food.

**Q. 3.46** New Zealand’s International Human Rights Action Plan states we will play a leadership role in advocating for the rights of persons with disabilities. How should New Zealand advocate for the rights of persons with disabilities in the negotiations and at COP?

No comment.

**Q. 3.47** New Zealand has an International Human Rights Action Plan which sets out our international human rights advocacy priorities through to 2023. Are there any specific human rights that you see as most important for New Zealand to advance in the context of climate change?

New Zealand commits to maintain and defend the right to the highest attainable standard of health.<sup>53</sup> Access to healthy and nutritious food is essential to human health and wellbeing. Thus, it is important that New Zealand advocate for access to fresh fruits and vegetables as climate change threatens global food supply chains.

## **YOUTH AND CLIMATE CHANGE**

**Q. 3.48** Youth is a cross-cutting issue. How do you think New Zealand should advocate internationally for young people when taking action to address climate change?

Youth are the future of food and fibre. We need to train the next generation to produce our food and imagine the foods of the future, which will involve climate change resilient crops and plant-based diets.

There is also a talent pipeline problem in the horticulture. Despite many available jobs, growers struggle to find skilled workers, which threatens day-to-day operations in the short term and succession planning in the long term.<sup>54</sup> The horticulture sector needs world class training grounds to get students involved in hands on research,

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<sup>52</sup> Office of the Minister for Climate Change, Chair Cabinet Business Committee (CBC). *Update to the Climate Change Negotiations Mandate*. 1 March 2022. <https://www.mfat.govt.nz/en/media-and-resources/proactive-release-cop26-new-zealands-objectives-and-outcomes/> (p. 48 of pdf)

<sup>53</sup> New Zealand International Human Rights Action Plan 2019-2023 Advocacy Priorities. [NZ-Human-Rights-Action-Plan.pdf \(mfat.govt.nz\)](https://www.mfat.govt.nz/en/media-and-resources/proactive-release-cop26-new-zealands-objectives-and-outcomes/) Accessed 01/05/23 (p. 3)

<sup>54</sup> Deloitte. New Zealand’s food story: The Pukekohe Hub, 2018. <https://www2.deloitte.com/nz/en/pages/primary/articles/pukekohe-hub.html> Accessed 01/05/23 (p. 8)

help workers upskill, and provide extension services to existing growers.

**Q. 3.49** How can views from young people be better understood and reflected in negotiating positions?

New Zealand's negotiating team should include people under the age of 30 to advocate for current and future generations.

## **BIODIVERSITY AND NATURE-BASED SOLUTIONS**

**Q. 3.50** What outcomes would you like to see internationally in relation to Nature-Based Solutions?

No comment.

**Q. 3.51** Are there specific environmental or social safeguards, which New Zealand should be pursuing internationally? If yes, how?

No comment.

**Q. 3.52** How can countries be encouraged to promote biodiversity benefits, and minimise risks of negative impacts on biodiversity from climate action?

No comment.

**Q. 3.53** Are there insights New Zealand can bring to the international climate-biodiversity nexus from te ao Māori and a kaupapa Māori perspective?

It is critical that the Government engage in early, open conversation with iwi and Māori. Policymakers need to collaborate with Māori through intentional, face to face engagement and understand how their worldview might provide insight into a positive pathway for action. Online consultation is not sufficient.

The te ao Māori perspective is that we don't inherit the earth, we borrow it from our children. That means that we make sacrifices today for a better future for the next generation. When it comes to climate and biodiversity, that means investing heavily now for better outcomes later.

**Q. 3.54** What else should New Zealand be doing internationally to promote more integrated global climate and biodiversity action?

Orchards are one form of biodiversity that introduces a range of trees to a landscape while producing low emissions food at the same time.

## **JUST TRANSITION**

Q. 3.55 What outcomes would you like New Zealand to advocate for internationally in relation to just transition?

### 3.55.1 Economic Opportunities

COP is an opportunity to work with other countries to strategise for a transformed future adapted to climate change while lifting up vulnerable communities. The *Update to the Climate Change Negotiations Mandate* states, “there is potential for New Zealand to actively contribute to learning and knowledge sharing between countries on policies and principles on how to stimulate economic transformation while managing the impacts of the transition on communities most affected by transformative change, including convergence with other aspects such as automation and digitisation”<sup>55</sup>. Making economy-scale changes to our production systems will transform the way we live. It can be an opportunity for an influx of resources into the rural and low-income communities that will be most affected.

It's also a chance to open up access to the opportunities that will come along with a changing food system. The Global Alliance for the Future of Food lays what happens in a vacuum of government financial support for low emissions food systems, “a lack of finance can reinforce the unequal distribution of value in food systems – the concentration of market power in the hands of just a handful of international companies and investors. This can inhibit the production and trading opportunities available to rural communities. In turn, the lack of investment reaching rural producers both perpetuates poverty and limits farmers’ abilities to shift toward more sustainable practices”.<sup>56</sup> There is an alternate path with government support, wherein resilient rural communities of the future will have access to financing to start and sustain eco-friendly businesses.

### 3.55.2 Compliance Costs

With New Zealand as a case study, many planning policies making it burdensome or even impossible to expand horticulture or change land use to horticulture. To produce enough food for the country, horticulture has to expand to meet growing population and nutritional needs, especially if people trend toward lower-emissions diets.

Regulatory burden also prevents new businesses from starting and causes growers to leave the sector due to the stress on mental health of not knowing whether your business will remain viable in an ever-changing political landscape. Growers need certainty that they will have a strong mandate under domestic and international agreements to continue their work.

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<sup>55</sup> Office of the Minister for Climate Change, Chair Cabinet Business Committee (CBC). *Update to the Climate Change Negotiations Mandate*. 1 March 2022. <https://www.mfat.govt.nz/en/media-and-resources/proactive-release-cop26-new-zealands-objectives-and-outcomes/> (p. 38 of pdf)

<sup>56</sup> Global Alliance for the Future of Food. *Untapped Opportunities: Climate Financing for Food Systems Transformation*. n.p.: Global Alliance for the Future of Food, 2022. Accessed 21/04/23 [climatefinancereport-english.pdf \(futureoffood.org\)](https://www.futureoffood.org/climatefinancereport-english.pdf) (p. 8)



Right now, a lot of growers feel like government is making it increasingly difficult to do their jobs. There needs to be a policy mindset shift that food production is essential to a country's transition to a low emissions economy with less reliance on imports, and it's essential to our health and wellbeing.

Some helpful steps would be advocating for industry assurance programmes like Global G.A.P. as a pathway to prove climate action, instead of each country reinventing the wheel with new reporting requirements.

### 3.55.3 *Labour Availability and Training*

The fruit and vegetable growing industry in New Zealand is facing significant challenges related to labour availability and cost. Many growers are struggling to find enough workers to pick and pack their crops, which is leading to both economic losses and food waste. Horticulture is labour intensive, so it requires immigration and labour settings to support matching skilled workers with meaningful jobs.

In a just transition, many people will be leaving emitting industries to find more environmentally sustainable work. Horticulture has the need for workers, so governments should match this population with jobs by funding training initiatives.

### 3.55.4 *Food Security*

Improving food security requires sustainable local market and regulatory conditions to feed the population. Changes in environmental regulations and extreme weather events may also lead to increases in the cost of food globally.

A secondary market for "wonky" food - products that don't meet supermarket requirements but are still safe and appropriate to eat - would provide lower cost options for price sensitive customers. Packhouses and growers would be interested in this as long as it is even slightly more profitable than cost neutral. Many now lose money on trucking when they send their discarded produce to animal feed.

**Q. 3.56** How do you think the perspectives of groups disproportionately impacted by climate change should be included in global approaches to the transition to a low emissions future?

No comment.

## **RESPONSE MEASURES**

**Q. 3.57** What outcomes would you like New Zealand to advocate for internationally in relation to Response Measures?

No comment.

**Q. 3.58** Are there any domestic climate policies in particular you are concerned will have

negative impacts internationally? If yes, how can we ensure New Zealand is not contributing to these?

No comment.

## OCEANS

Q. 3.59 What are the particular ocean-climate issues that New Zealand should focus on, including at the next Ocean-Climate dialogue in June 2023?

No comment.

Q. 3.60 What role can New Zealand play to support the dialogue to address ocean issues that are important to New Zealand and the Pacific?

No comment.

Q. 3.61 How can the UNFCCC support collaborative ocean-climate action across UN processes?

No comment.

## TECHNOLOGY

Q. 3.62 What outcomes would you like New Zealand to advocate for internationally on low-emissions technology development and transfer?

### 3.62.1 Technology

Diversification to horticulture presents an opportunity to reduce emissions while increasing food production. To enable horticulture growth to continue and increase, we need investment in the right areas (for example, plant varieties, chemicals, robotics) and a regulatory/policy environment that enables the market to respond.

We seek targeted investment in accelerating research and technology uptake for process heat and alternative fuels. New Zealand does not have the capacity to develop all of the technology that we need on our own. We seek favourable conditions for international companies to test new agricultural technology in New Zealand, so that we are well positioned to be early adopters.

### 3.62.2 Science

Research, science and innovation will play an important role in climate change adaptation. Science can help to develop new cropping systems and varieties that are more climate resilient. Research can also support the transition to low emissions land uses (e.g., horticulture), including research into new products/varieties, robotic technology and new generation orchard design.

This is important both from a perspective of climate change adaptation and importantly, providing New Zealand with options for meeting our targets should other initiatives not proceed at the pace necessary.

These are the key areas that HortNZ would like to see prioritised:

- Research into sea level encroachment impacts on horticulture land and impacts on highly productive land for future use. Land purchases will become reliant on climate change impacts, particularly for food producers. Knowing now (or in the relative short term) if current or soon to be purchased land will be impacted will enable growers to start adaptation planning.
- The Environmental Protection Agency (EPA) has 43 chemicals on the product priority reassessment list, and they also reassess chemicals not included on this list e.g. Hydrogen Cyanamide (critical for kiwifruit production). The EPA has proposed to ban the chemical which would mean most green growers would be out of business which would result in higher emission land use change. The government needs to fund research into loss of food production and into sustainable and effective alternatives where existing productive chemicals are removed from use.
- Research into climate resilient fruit and vegetable varieties.
- Ongoing research into fertilisers, that have less emissions and are better matched to the uptake of plants, and the relationship with soil processes.

Outcomes sought:

- Investment in innovation to develop new cropping systems and varieties that are more resilient
- Research into transitioning to horticulture as a low emissions land use activity
- Research into loss of production from removing agrichemicals from use and research into effective and sustainable alternatives to agrichemicals in order to support low emissions land use

## Section 4: Provide General Feedback

**Q. 4.1** You are welcome to provide feedback on any part of the proposal to update New Zealand's approach to international climate negotiations.

No comment.