SUBMISSION ON

Building Resilience to Hazards Long-term Insights Briefing

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To: Department of the Prime Minister and Cabinet, Ministry for the Environment
Name of Submitter: Horticulture New Zealand
Supported by: Potatoes NZ, Pukekohe Vegetable Growers Association, Strawberry Growers NZ, Tomatoes NZ

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Ahumāra Kai Aotearoa

OVERVIEW

Submission structure

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Our submission

Horticulture New Zealand (HortNZ) thanks the Department of the Prime Minister and Cabinet (DPMC) and the Ministry for the Environment (MfE) for the opportunity to submit on the *Building Resilience to Hazards Long-term Insights Briefing* and welcomes any opportunity to continue to work with DPMC and MfE and to discuss our submission.

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

PART 1

HortNZ's Role

Background to HortNZ

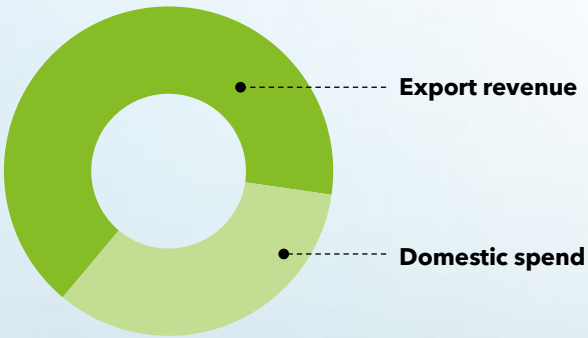
HortNZ represents the interests of approximately 4,300 commercial fruit and vegetable growers in New Zealand who grow around 100 different fruits and vegetables. The horticultural sector provides over 40,000 jobs.

There are 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.



Industry value $7.54bn
Farmgate value $4.89bn
Export revenue $4.99bn
Domestic spend $2.55bn

Source: HortNZ Annual Report 2025

PART 2

Executive Summary

Food supply chains are critical life lines

Food supply chains, including the roads and freight that are essential for moving fruits and vegetables to population centres, should be considered part of the critical lifelines in the event of a major emergency.

Food is a critical human health need, alongside shelter and water. The ability to both transport that food to people and to continue to produce that food is important if there is a prolonged disruption to supply chains. This is a matter of resilience and national security. If access to food is severely disrupted, there is a risk to social order.

When natural hazards affect access to food

Natural hazards, where they affect the production, processing, transportation and retail of fruits and vegetables, will be a continued risk to New Zealand's domestic food supply and high-value exports into the future. Adverse weather events, such as the cyclones, heavy rainfall, flooding and slips witnessed in recent years, can devastate crops and significantly disrupt supply chains. Increasing biosecurity risk with climate change and future pandemics which prevent workers from entering the country can also be considered natural hazards and will affect our ability to grow.

These hazards will impact the ability of New Zealanders to access food in hazard-affected areas and throughout the country. Given the centralised nature of New Zealand's supply chains, when one region's crops are impacted, it affects the availability of fruit and vegetables for consumers in other regions. The social and economic costs of events which disrupt the supply and prices of fruits and vegetables will include acute and sustained impacts on public health, nutrition, and household budgets. In a resilient system, there would be regional diversity in growing regions and prioritisation for the transportation networks needed to move food, which would mitigate the impacts of supply chain disruption.

Flood protection and water storage

Flood protection and water storage are important climate adaptive infrastructure which should be included as opportunities to build resilience in the Long-term Insights Briefing. They are needed given the increasing frequency and intensity of storms and droughts.

Preparing for recovery works

The Government also needs to set expectations and prepare policy in advance for disaster response and recovery. After Cyclone Gabrielle, it took weeks to finalise Orders in Council to let land users get to work on recovery. Orders in Council should be drafted and on hand in advance of the next disaster, so landowners are empowered to undertake recovery works promptly, rather than feeling powerless to act while waiting for authorisation to do works.

PART 3

Submission

1. General Support

HortNZ supports long-term planning for natural hazards. The purpose of this briefing is to "consider how New Zealand might better prepare to meet the challenges presented by future hazard events" (p. 4), so our submission will focus on this scope.

2. Discussion Questions

This submission responds directly to the consultation questions.

Q. 4	What is your feedback on the issues and opportunities outlined in the briefing? Are there any you think we should explore further or new ones we have missed?

The briefing aims to explore "the trade-offs and tough decisions New Zealand will need to make in building resilience, as well as the difficult realities we will need to understand" (p. 4).

One of those trade-offs is how we will manage the balance of using hazard-prone land for its highest and best use while managing risk. HortNZ sees spatial planning as an opportunity to manage that trade-off.

2.1. Spatial planning

Spatial planning is a well-suited tool to manage natural hazard risk. At the catchment scale, spatial planning can be used by councils to identify flooding vulnerabilities such as population centres and key infrastructure. It can also be used to identify where fertile land should be protected for food production, and where up-stream activities could cause harm in flooding events to activities lower in the catchment.

Catchment planning can be used to identify mitigations for hazard risk such as land use practices to avoid erosion and capture sediment in the upper catchment as well as engineering flood protection in the lower parts of the catchment. These approaches can achieve multiple benefits, including for economic resilience, biodiversity, water quality and climate change adaptation.

Spatial planning needs to involve communities at the relevant planning scale. In recent years, catchment groups and collectives have been empowered to build resilience through targeted government funding, such as the Hill Country Erosion Fund.[1] These funds have primarily focused on pastoral farms, but their scope should include support for growers and farmers to build resilience in the lower catchment as well.

When natural hazards policy is developed in New Zealand, it may include shifting high-risk, sensitive activities such as housing, schools and hospitals away from hazard-prone

[1] Ministry for Primary Industries. (16 May 2024). "Hill Country Erosion Programme for councils".

land. That land may still be suitable for lower-risk activities, such as fruit and vegetable production and processing, where staff can easily evacuate. Floodplains often provide fertile soils, so growing food in hazard areas may be both efficient – to make use of the land with a lower risk activity – and the most productive use of a limited natural resource.

One of the difficult realities we need to understand is that New Zealanders' access to food during natural hazard events cannot be taken for granted.

2.2. Food supply

A gap in the briefing is consideration of the resilience of New Zealand's domestic food supply for our population and the continued economic benefit of exports. The roads, ferries and ships that move food around New Zealand are vulnerable to natural hazards. Adverse weather events, such as the cyclones, heavy rainfall, flooding and slips witnessed in recent years, can devastate crops and significantly disrupt supply chains. This is particularly salient following recent flooding in Tasman, Cyclone Gabrielle and the Auckland Anniversary floods, which showed how hazard events disrupt the production and transportation of food for New Zealanders to eat and for export, affecting the prices of food in the supermarket and the cost of living.

These hazards will impact the ability of New Zealanders to access food in hazard-affected areas and throughout the country given the centralised nature of New Zealand's supply chains. Food supply chains, including the roads and freight that are essential for moving fruits and vegetables to population centres, should be considered part of the **critical lifelines** in the event of a major emergency.

Food is a critical human health need, alongside shelter and water. The ability to both transport that food to people and to continue to produce that food is important if there is a prolonged disruption to supply chains. This is a matter of resilience and national security. If access to food is severely disrupted, there is a risk to social order.

Even once the basic amount of food for survival is provided for, the social and economic costs of events which disrupt the supply and prices of fruits and vegetables will include acute and sustained impacts on public health, nutrition, and household budgets. When events cause reduced supply, prices increase. For families living in deprived areas, increases in fruit and vegetable prices compel them to substitute the purchase of healthier whole fruit and vegetables with cheap, energy-dense and nutrient-poor products.[2] This has an impact on the overall wellbeing of communities. Food insecurity plays a role in educational outcomes as well as physiological and psychological health.[3]

Severe weather events are not the only aspect of climate change putting food production under pressure. Increased biosecurity risk with climate change and future pandemics which prevent workers from entering the country will also affect our ability to grow food for New Zealanders.

The Long-term Insights Briefing also aims to explore, "opportunities for action, using case studies to illustrate potential ways we could strengthen resilience, leverage technology

[2] Rush, E., Savila, F., Jalili-Moghaddam, S., & Amoah, I. (2018). Vegetables: New Zealand Children Are Not Eating Enough. Front. Nutr.

[3] The association of food security with psychological distress in New Zealand and any gender differences, Social Science & Medicine 2011

and develop innovative infrastructure" (p. 4). HortNZ sees three such opportunities: **flood protection, water storage** and proactive **preparation for recovery works**. These case studies would fit under the briefing Section 4: Opportunities to build resilience.

2.3. Flood protection

Flood protection is an essential part of building resilience to natural hazards. Its exclusion from the briefing is an oversight worth remedying.

Strategic management of flood protection requires considering future effects of climate change, including increased frequency and intensity of storms. A mix of green and grey infrastructure will be needed depending on local context and hydrology.

Horticulture often locates in flood plains due to the high soil fertility in these areas. Flood protection should be considered for valuable horticulture assets given the regional and national economic importance of these activities. These assets include buildings and structures that are part of primary production like artificial crop protection structures and packhouses, as well as ancillary buildings such as sheds for equipment and storage of hazardous substances.

2.4. Water storage

Water storage can provide a back-up supply of water for town and commercial use when the regular supply is disrupted during a natural hazard event. Droughts are expected to become more frequent and severe in New Zealand.[4] Water storage can mitigate the risk of water shortages by collecting water when there is too much of it to use or when there is too little.

For example, Cyclone Gabrielle caused damage to drinking water infrastructure, including multiple breaks in Gisborne's water pipes, which halted supply from the main Waingake Water Treatment Plant and the backup Waipaoa plant.[5] A large commercial vegetable grower had recently built a 40 million litre dam for water storage, and they worked with Gisborne District Council to divert the farm's stored water to town supply for industrial use. The dam was then used to provide water supply to other food producers for over a month to keep the local food and beverage producers running.[6]

The resilience of water supply and treatment is important for the health and wellbeing of the population. Building that resilience requires not just advance planning, but proactive action. The Ministerial Inquiry into Land Use noted that during Cyclone Gabrielle, "The water supply and treatment systems were severely impacted in Gisborne, Wairoa and other small towns creating significant health risks. In many cases these resilience problems had been understood for some time and while plans and materials were in place to fix them, the cyclone intervened."[7] Like planting a tree, the best time to prepare for a hazard event is twenty years ago. The second-best time is today.

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[4] MfE. (8 November 2023). "State of our atmosphere and climate". Accessed 13/08/25.
[5] Salde, Maria. "Private dam saves the day in post-Gabrielle Gisborne." 28 March 2023. National Business Review.
[6] Salde, Maria. "Private dam saves the day in post-Gabrielle Gisborne." 28 March 2023. National Business Review.
[7] Outrage to optimism CORRECTED 17.05 (para 18).

All options for water storage are part of building resilience, including on- and off-line, individual and community scale. Community water storage is often the most efficient solution in horticultural areas where groundwater is not sufficient.

The flat, highly productive land at the urban-rural fringe at the bottom of the catchment often has high land values and dense land use, making it a less efficient location for water storage. It may be a better use of land to locate water storage further up the catchment instead of on the lowlands. Covering the fertile soils used for horticulture with storage tanks or dams is a poor use of that resource. Community schemes can be based on lower value land, and then the water can be distributed to users via natural conveyance (using natural waterways and aquifers), water races or pipes.

2.5. Preparation for recovery works

The Government needs to set expectations and prepare policy in advance for disaster response and recovery. After Cyclone Gabrielle, it took weeks to finalise Orders in Council to let land users get to work on recovery. Orders in Council should be drafted and on hand in advance of the next disaster, so landowners are empowered to undertake recovery works promptly, rather than feeling powerless to act while waiting for authorisation to do works.

Q. 5	Do you have any views on the definition of national resilience outlined on page 5 of the briefing?

The definition should include the ability of people to access their basic needs in the face of natural hazards, including food, shelter, drinking water and electricity.

Q. 6	Please provide any other feedback you have on the draft briefing.

No other comments at this time. HortNZ welcomes any opportunity to work with DPMC and MfE and discuss what is needed for a resilient food supply.