

**Submission  
No 54**

## **FOOD PRODUCTION AND SUPPLY IN NSW**

**Organisation:** Macquarie University Planetary Health and Equity Research Network

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# **Response to the Parliamentary Inquiry on food production and supply in NSW**

Macquarie University Planetary Health and Equity  
Research Network (PHERN)



## Introduction

This submission is made on behalf of the Macquarie University Planetary Health and Equity Research Network (PHERN), an inter-disciplinary collaboration that brings together researchers from the disciplines of population health, epidemiology, nutrition, geography, planning and philosophy. The group has common research interests and expertise across a number of areas including: the equity and sustainability of food systems; community food initiatives; food insecurity; the effects of climate change and emerging infectious diseases on human health and wellbeing; and the health of underserved populations such as refugees.

In our submission we respond to four of the 11 Terms of Reference (TOR) of this Parliamentary Inquiry into improving food production and supply in NSW. We provide a summary of our recommendations below followed by an evidence-based rationale for these recommendations.

## Summary of Recommendations:

### TOR: 1. Improving food security and equitable access to food

**1.1 That regular comprehensive measurement and monitoring of food insecurity (using tools such as the USDA survey) is undertaken, particularly among the priority groups we outline**

**1.2 That dedicated food strategies are developed with measurable goals to address food insecurity and improve equitable access to food**

### TOR 2. Reducing food waste and destruction

**2.1 For continued investment and expansion of FOGO services across NSW**

**2.3 That a code of conduct is developed for food redistributors (supermarkets, hospitality and manufactures/producers) to ensure the food provided to food relief charities is safely stored, correctly labeled, nutritious and handled safely**

### TOR 5. Managing the impact of climate change

**5.1 Further research into ways to mitigate the impacts of climate change on the cost of food and ensure fair prices for farmers and consumers**

**5.2 Further research into and implementation of policies that provide incentives for transitions to regenerative agriculture practices and localised food production that reduce greenhouse gas emissions.**

### TOR 6. Limiting the impact food production has on the environment, including overfishing

**6.1 That a food systems approach incorporating consumption-side issues is adopted when seeking to minimise the impact of food production on the environment**

**6.2 That government standardise a certifiable eco-labelling scheme to inform consumer choices**

**6.3 That government-approved dietary guidelines incorporate environmental considerations into their recommendations so as to contribute to a healthy environment**

**6.4 That government messaging promotes general consensus within the literature that more sustainable and healthy diets are those that have a high proportion of unprocessed plant-based products**

## Rationale for recommendations

### TOR 1. Improving food security and equitable access to food

Food insecurity is a growing concern in Australia (McKay et al., 2019). Food insecurity is not a matter of a lack of food, but a lack of access to affordable, nutritious and culturally appropriate food. Food Bank Hunger reports have noted an increase of people experiencing food insecurity over the past four years from 17% in 2017 to 28% in 2021 (Food Bank Australia, 2017 and 2021). New South Wales (NSW) does not currently have consistent and reliable data on the prevalence of food insecurity in the community which makes it difficult to ascertain the true extent of the problem in NSW.

Those most affected by food stress and food insecurity in Australia include low-income, under-employed, regional, remote and refugee households (Food Bank Australia, 2019; NSW Department of Health, 2005). Of this population, women are 1.5 times more likely to experience food stress and insecurity than their male counterparts (Food Bank Australia, 2019). Food stress occurs when households are required to spend over 25% of their disposable income on groceries. As Barosh et al. (2014) document, food in Australia is becoming increasingly expensive and comprising a greater portion of average weekly incomes. Food relief providers play a crucial role in addressing food insecurity, however, they frequently report having to turn people away due to insufficient food and resources with less than two in five charities in 2019 feeling as though they can meet the needs of the people they assist (Food Bank Australia, 2019).

Research by Williams and Tait (2021) on community food provisioning initiatives in Sydney found food providers noted numerous challenges including difficulties “providing fresh food”, “having enough food to meet demand”, the “increasing costs of fresh food and freight charges”, the “reliability of food donations” and problems “obtaining enough food with limited financial resources”. Food relief providers rely on donations and re-distributed surplus food (food waste) from organisations such as bakeries, Food Bank, OzHarvest and Secondbite. As a result, the food provided may not be reliable, culturally appropriate or address the nutritional needs of recipients, with many people accessing food relief remaining food insecure (Bazerghi et al., 2016). Food insecurity has long term physical and mental health outcomes (McKay et al., 2019; Bazerghi et al., 2016).

Food insecurity is caused by a range of factors including food environments: the cost of fresh healthy versus unhealthy foods and the prevalence of unhealthy and cheap fast-food options in low-income neighbourhoods; housing issues such as a lack of space to cook and prepare food at home due to substandard housing; and precarious work conditions which can limit the time people have to spend on meal preparation (Kneafsey et al., 2017, p. 623).

University students are particularly affected by food insecurity, with studies suggesting up to 25% of students affected (Gallegos et al., 2014). This can mean students skip meals, choose less nutritious options or go without food because they don't have reliable access to culturally appropriate foods. The knock-on effects of food insecurity in this group can lead to poor performance whilst studying and negative impacts for physical and mental health (Gallegos et al., 2014; Whatnall et al., 2019).

The impacts of Covid-19 are likely to have contributed to this already known issue. A recent study of over 100 students at Macquarie University during the Covid-19 pandemic carried out by members of this network found 33% of students were food insecure with 36% indicating they sometimes could not afford to buy balanced meals. One-fifth of students reported skipping meals and ate less than they should because of a lack of money for food. Alarming, there was a much higher level of food insecurity among international students (59%) than domestic students (15%) indicating international

students are particularly susceptible to food insecurity. It is important to note that the [six item United States Department of Agriculture Food Security Survey Module](#) was used to measure food insecurity in this study. This questionnaire includes information on skipping meals, affordability and importantly hunger and is a more sensitive measure than the current one item question which is used for population health surveys in Australia.

There are no reliable and consistent population level data collected on the levels of food insecurity in NSW which means 1) that we do not know the true extent of food insecurity and 2) there are no consistent government targets set to reduce food insecurity.

**Our recommendations:**

**1.1 That regular comprehensive measurement and monitoring of food insecurity (using tools such as the USDA survey) is undertaken, particularly among the priority groups we outline**

**1.2 That dedicated food strategies are developed with measurable goals to address food insecurity and improve equitable access to food**

This food strategy should be developed in consultation with academics, health experts, planners, state and local governments and include strong representation of Aboriginal and Torres Strait islander peoples and culturally and linguistically diverse communities.

**TOR 2. Reducing food waste and destruction**

Food waste is a key contributor to greenhouse gas emissions (ARCADIS, 2019). Studies show households are responsible for approximately 34% of food waste generated in Australia (ARCADIS, 2019). The Australian Government Department of Agriculture (2021b) found that “bin audits have shown 40-60% of waste currently sent to landfill is organic waste”. Food Organics and Garden Organic (FOGO) municipal composting systems are an important service that can be provided to households to reduce the environmental impacts of food waste. Presently 223 out of 563 local government areas in Australia have food and/or organic waste disposal available through their waste services (Australian Government Department of Agriculture, 2021a).

Surplus food is often redistributed to food relief charities in order to address the excess food produced by the hospitality, retail supermarkets and food manufacturing sectors. This food can be very helpful for food relief charities addressing the immediate needs of clients experiencing food insecurity. However, food can also be unhealthy and not appropriate for recipients. For example, large amounts of bread, confectionary and baked goods such as doughnuts are inappropriate as everyday food provided to food relief providers (Turner, 2022). There are also concerns about the way food is redistributed to charities with some supermarkets donating spoiled food or food that has not been stored correctly to ensure it is safe to consume (Turner, 2022). In their study of food waste redistribution Turner (2022) notes that supermarkets and their employees need to ensure that the food donated to charities is correctly sorted, correctly labelled, appropriately stored and handled to ensure it is safe and nutritious for food charities to redistribute (Turner, 2022). Without such actions the food donated to food relief charities becomes inedible and unsafe for recipient consumption leading to food charities having to dispose of the food, rather than being able to redistribute it to those who are experiencing food insecurity.

**Our recommendations:**

**2.1 For continued investment and expansion of FOGO services across NSW**



**2.3 That a code of conduct is developed for food redistributors (supermarkets, hospitality and manufactures/producers) to ensure the food provided to food relief charities is safely stored, correctly labeled, nutritious and handled safely**

*TOR 5. Managing the impact of climate change*

*“With less reliable weather and changing seasons we are seeing insect pests coming at different times of year or lasting for longer. Conditions for fungus pests are also coming at different times of year. We have found with the seasons no longer being reliable, crops don’t grow as well, for example, we were expecting warm weather to appear in September last year, but it didn’t get really warm till late November, which really delayed our crops. Extreme weather events such as the frost in Sydney last year (which is very unheard of) killed a lot of our plants, which are not adapted to frosts”  
(Questionnaire Response Williams and Tait 2021)*

Climate change impacts all aspects of food security, including food production, food distribution networks, access to food and human health. Food production, especially livestock, is a major source of greenhouse gas emissions, notably methane. Moves towards more regenerative forms of agriculture, better adapted to a changed climate, offer opportunities to both reduce emissions and increase the storage of carbon in soils and vegetation (sequestration) whilst still contributing to essential food production. The importation of food leaves Australian’s vulnerable to the external price shocks associated with climate impacts on food production around the world, as well as contributing to high emissions from transportation, so-called food miles. More localised and adaptive food systems are required. Land use planning that reserves land used for food production near major residential areas and in urban areas, contributes to reducing emissions associated with food transport across large distances. Moreover, community based food production initiatives, in backyards and community gardens, have obvious health and climate benefits that can be further facilitated through urban planning and local government initiatives.

The increasing effects of climate change hold ramifications for Australia’s ability to feed the nation. As weather patterns become more extreme, traditional food growing areas face a number of challenges from water scarcity, heat stress and variable temperatures (Hughes et al., 2015). Longer droughts and extreme weather events, such as cyclones and fires, have and will continue to negatively affect food supply (Cai et al. 2015). Further, changes in temperatures will continue to reduce the quality and seasonal availability of food in Australia (Hughes et al., 2015). Rising temperatures also pose human health risks in terms of increased risk of food being spoiled or contaminated during extreme heat events or during blackouts associated with disasters. All of these factors contribute towards rising prices of fresh food available to the Australian market. As a nation with already one in five households struggling to access sufficient, safe and nutritious food at any one time (Foodbank, 2019), these projected price increases are of concern.

**Our recommendations:**

**5.1 Further research into ways to mitigate the impacts of climate change on the cost of food and ensure fair prices for farmers and consumers**

**5.2 Further research into and implementation of policies that provide incentives for transitions to regenerative agriculture practices and localised food production that reduce greenhouse gas emissions.**

*TOR 6. Limiting the impact food production has on the environment, including overfishing*

Food production requires land and resources that have impacts on the environmental quality. Of particular concern are the impacts of food production on climate, biodiversity, fisheries, forests, rivers and groundwater, and soils. Current food production systems in Australia and globally are recognised as key drivers of environmental degradation. Efforts to limit the impact of food production upon the environment has mostly come in the form of production side technology improvements. Important gains have been made in this space as production has become more efficient, with higher yields per unit of land. However, it is increasingly recognised that production advances alone are not enough to address rapidly degrading environmental systems as demand for food products increases. Instead, as recommended by the IPCC, a food systems approach is necessary, whereby production and consumption are addressed simultaneously.

If consumers are to be engaged in efforts to reduce the environmental impacts of their food choices there is a need for improved understanding of the environmental impacts of their food choices. This can take a product-oriented approach through the development of a certifiable eco-labelling scheme or a diet-oriented approach in which dietary advice considers both sustainability and health components. Choice estimates there are currently 57 eco-labels in Australia generating confusion for consumers and raising concerns about quality. If consumers are to be empowered to limit the impact food production is having on the environment, there is an urgent need for better and more regulated eco-labelling, preferably through a government standard similar to the Health Star Rating System.

At the same time it is important that dietary guidelines consider the environmental impacts of dietary recommendations. Good health requires not only healthy food but a healthy environment (Public Health Association 2018). There are a number of diets that incorporate environmental concerns into their recommendations, with the highest profile being the Planetary Health Diet recommended by the EAT-Lancet Commission (2019). A common theme within healthy and sustainable diets are recommendations to increase the proportion of whole plant-based foods and decrease the proportion of processed and animal-based foods while maintaining a diverse diet. The NSW government should review these and other diets and clearly assess and articulate the benefits of more sustainable diets to guide consumers away from less sustainable food types.

**Our recommendations:**

**6.1 That a food systems approach incorporating consumption-side issues is adopted when seeking to minimise the impact of food production on the environment**

**6.2 That government standardise a certifiable eco-labelling scheme to inform consumer choices**

**6.3 That government-approved dietary guidelines incorporate environmental considerations into their recommendations so as to contribute to a healthy environment**

**6.4 That government messaging promotes general consensus within the literature that more sustainable and healthy diets are those that have a high proportion of unprocessed plant-based products**

Summary

We thank you for the opportunity to contribute to the Parliamentary Inquiry on food production and supply in NSW. The Macquarie University Planetary Health and Equity Research Network would be happy to share additional research information as it becomes available and to appear before the Inquiry Panel as necessary to expedite the exchange of information and translation of findings into practice.

Yours sincerely,

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On behalf of the Macquarie University Planetary Health and Equity Research Network (PHERN)





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