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Food for Thought: A Strategic Approach Underpinning Action on Food Security in the Yarra Ranges

A Food Security Policy Directions Paper

2012

Project Report

Food for Thought: A Strategic Approach Underpinning Action on Food Security in the Yarra Ranges

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Executive Summary

Food security is defined as an individual's ability to access safe and nutritious foods without seeking emergency food relief. Previous research conducted by the Outer East Health and Community Support Alliance which investigated food insecurity in the Yarra Ranges identified the need for Yarra Ranges Council to facilitate an evidence based approach to addressing food security in the region; emphasising the importance of developing a food security policy.

The aim of this project was to increase the quality and quantity of information available to the Yarra Ranges Council to respond to food security in the region.

A number of key methods were used. A literature review investigated the following topics: food security frameworks, determinants of food security, key themes in food security policies and the development process used for existing food security policies. Key informant interviews were conducted with stakeholders identified through a stakeholder analysis to understand community perceptions of food security. Data was thematically analysed. Findings from these key methods informed the development of a process for creating a food security policy.

The literature review identified 18 food security frameworks, with 4 considered most relevant to the Yarra Ranges, a range of determinants of food security which were specific to the Yarra Ranges, 11 key themes in existing food security policies and a summary of the policy development processes used by other Victorian municipalities. Qualitative data from 6 focus groups and 17 semi-structured interviews identified 8 key themes: strategic policy directions and principles, a commitment to responsible land use planning, support for local agriculture, moving towards a sustainable food environment, creating a diverse and resilient food supply, support during times of food insecurity and natural disasters, improving capacity and changing social norms, and increasing skills and knowledge. The suggested policy development process consisted of 16 steps which will provide guidance to other municipalities who wish to develop a food security policy.

In conclusion the report identified key literature, and themes from stakeholder consultations which informed a process for developing a food security policy, improving the evidence available to Yarra Ranges Council to respond to food security.

Recommendations include the development of a food security policy for the Yarra Ranges, policy implementation and development of an action plan, thorough evaluation and continued monitoring of food security in the Yarra Ranges, benchmarking against other local government strategies and publishing the process for developing a food security policy.

Contents

1.0 Project Vision, Goal, Objectives and Purpose

Long Term Vision:

To improve food security amongst residents living in the Yarra Ranges by ensuring availability and access to safe and nutritious foods at all times without having to resort to emergency food sources.

Goal:

To provide direction to the Yarra Ranges Council regarding an evidence based approach to food security in the region to underpin the development of a food security policy. This policy will assist to facilitate access to and supply of food to the community that is equitable, economically viable, sustainable and reflective of the unique characteristics of the municipality.

Objectives:

1. To increase knowledge of community perceptions of factors affecting access to and supply of food in the Yarra Ranges to inform the development of a food security policy directions paper by the 8th October 2012.

2. To increase the quality and quantity of information available to the Yarra Ranges Council to respond to food security in the Yarra Ranges by the 26th October 2012

Purpose:

The aim of the project was to:

  i.   Identify and understand issues affecting food security in the Yarra Ranges
  ii.   Understand key stakeholder perceptions of food security in the Yarra Ranges
  iii. Identify a process for developing a food security policy
  iv.   Develop a food security policy directions paper

This project endeavoured to raise the profile of food security within the Yarra Ranges Council and provide the council with a strategic framework which will support strategies to improve access to, and supply of, affordable and nutritious foods in the Yarra Ranges.

2.0 Background

2.1 Food Security

Food security, food insecurity and the determinants

Food security is defined by VicHealth as 'the state in which all persons can obtain nutritionally adequate, culturally acceptable, safe foods through non-emergency food sources [1,2,3,4].' Food security has multiple determinants, classed under the major subheadings of food access and food supply [5]. Examples of determinants of food security include location of food outlets, price, time, financial resources and convenience [5]. These determinants are often interrelated [5], and inadequate food access and/or supply results in food insecurity. Food insecurity is defined as 'limited or uncertain availability of nutritionally adequate and safe foods, or limited or uncertain ability to acquire appropriate foods in socially acceptable ways [5,6]. '

Vulnerable groups

Having adequate food to eat is a basic human right, and as a developed nation, Australia is generally considered to be food secure [5,7]. Despite this, certain groups of the population are particularly vulnerable to food insecurity, including those with low incomes, chronic illness or disability (including mental illness), culturally and linguistically diverse (CALD) or indigenous backgrounds, and people living in remote or geographically isolated areas [2,4,8]. However, food insecurity can affect anyone, particularly in light of recent global phenomena such as climate change and economic crises [8,9].

Consequences of food insecurity

Food insecurity leads to poor dietary intake and nutritional status, resulting in negative health outcomes, including reduced quality of life [6,9]. In developed countries, food insecurity has been linked to an increased risk of adult overweight and obesity, particularly in women (due to increased consumption of affordable energy dense, processed foods) , resulting in an increased risk of chronic diet-related diseases such as type 2 diabetes [1,5,6]. However, extreme food insecurity has been linked with being underweight and feelings of hunger [10]. Food insecurity also affects emotional and social health, due to feelings of anxiety, powerlessness and social exclusion [1,5,8]. In children, food insecurity has been associated with reduced cognitive functioning and academic performance [6,11].

2.2 Food Insecurity in the Yarra Ranges

Introduction to the Yarra Ranges

Yarra Ranges Council is located in Victoria's outer east and has a population of 143,708 [12]. This municipality has a number of unique characteristics which influence the supply of nutritious and healthy foods to the region as well as residents' ability to access these [13]. The Yarra Ranges municipality covers an area of 2500km^2, is the largest metropolitan council in Melbourne and contains both urban and rural communities [13]. Despite only 3% of the municipality's area being classified as urban, 70% of residents live in these areas with the remaining community members residing in more rural areas [13]. The Yarra Ranges appears to be a relatively advantaged municipality according to the Socioeconomic Indexes For Areas (SEIFA) Scale with a ranking above the 80th percentile in terms of relative disadvantage [14]. A rank of 100 indicates the most advantaged area [14]. Despite this ranking, there are communities within the municipality who are very disadvantaged (indicated by a SEIFA score below the 50th percentile) which can be seen in appendix 1 [13].

Supply and access of affordable and nutritious food is an issue in the Yarra Ranges as 7% of residents ran out of food in the past 12 months and could not afford to purchase more [15]. This was higher than the state average of 6% [15]. Emergency food relief organisations have also reported an increase in demand for their services [13]. A survey conducted by the Outer East Health and Community Support Alliance in 2008 reported that 26% of individuals had experienced food insecurity in the past year and 50% of these individuals felt their circumstances had worsened over the past 24 months [13]. Whilst this survey targeted individuals who were at greater risk of food insecurity it still demonstrated that many individuals living in the Yarra Ranges were finding it increasingly difficult to access affordable and healthy foods [13].

Vulnerable groups

Yarra Ranges residents who have an increased risk of experiencing food insecurity are individuals and households who have a low income (single <$20,000 per annum, couple <$27,000 per annum, family <$38,000 per annum), individuals whose expenditure on groceries was less than $100 per week, individuals aged less than 60 years old, those living in single households and people who live in insecure housing (including government or public housing, rental, supported accommodation or other e.g. parent's home) [13]. Eighty percent of residents living in the Yarra Ranges are born in Australia with the next most common countries of birth being England and New Zealand [11]. However, there is an emerging Burmese community in the Yarra Ranges consisting mainly of individuals who have arrived on humanitarian visas [16]. These individuals often experience difficulty accessing foods which are culturally acceptable [13]. It is important to acknowledge that the Yarra Ranges is home to a small Indigenous population [12] who are also at risk of food insecurity for a number of reasons including financial stress, poor housing conditions and limited nutrition knowledge and skills [17].

Determinants of food insecurity in the Yarra Ranges

Increased costs of living as a result of rising housing, food and petrol prices are major determinants of food insecurity in the Yarra Ranges [13]. Additionally physical access (location of food outlets and access to transport), economic access and convenience are key factors which influence whether individuals can access and consume a healthy diet [13]. Individuals living in Warburton, Millgrove, Wesburn and Healesville are most at risk of food insecurity in the Yarra Ranges due to these towns having a SEIFA below the 50th percentile and a low ratio of fresh food outlets and supermarkets to takeaway and fast food outlets [13]. Additionally residents living in Millgrove and Wesburn have no access to a local fresh food outlet [13]. Due to the vast geographic nature of the Yarra Ranges, large areas have been classified as 'food deserts [13].' A food desert is an area where there is limited access to healthy foods such as fruit and vegetables [13]. In these areas the ability of residents to access essential food outlets and choose foods which are appropriate for a healthy diet is limited [13]. Access to transport is also an issue in the Yarra Ranges with 23 suburbs not accessible by public transport and limited wheelchair access available on buses [13]. Other factors identified as barriers to food security in the Yarra Ranges include time, lack of adequate facilities to store and cook food and food being viewed as a low priority [13].

The Victorian Healthy Food Basket (VHFB) survey is used to determine the cost of healthy foods in a specific area [18]. The tool was developed to measure the cost of nutritious foods and was designed to meet >80% of the nutrient and ≥95% of energy requirements for individuals over a 14 day period. The basket was designed for four family types [18]. These are a typical family (2 adults and 2 children), single parent family (1 parent and 2 children), elderly pensioner and single adult [18]. A VHFB survey was carried out in the Yarra Ranges in 2008 and 2011. Results from this survey are shown in the table below.

Table 1. Percentage of income used to purchase a healthy food basket in 2008 and 2011

Family type	2008		2011	
	Mean cost of a VHFB ($) [19]	% of income used to purchase the VHFB *(Income based on Centrelink figures)* [19]	Mean cost of a VHFB ($) [19]	% of income used to purchase the VHFB *(Income based on Centrelink figures)* [19]
Family Type 1 (typical family)	412.42	38	451.16	29
Family Type 2 (single parent family)	282.90	33	308.93	25
Family Type 3 (elderly pensioner)	99.12	18	107.93	16
Family Type 4 (single adult)	126.91	29	142.18	30

Data from Victorian Healthy Food Basket surveys have demonstrated that the cost of food increased from 2008 to 2011; however the percentage contribution to overall income decreased (with the exception of family type 4) [19]. Despite this, households are still required to spend a significant proportion of their weekly income on food in order to consume a nutritious diet [19]. Seventeen percent of households in the Yarra Ranges are also required to spend greater than 30% of their household income on mortgage or rent payments, further demonstrating the economic stress that households in the Yarra Ranges experience [15].

Consequences of food insecurity in the Yarra Ranges

As mentioned previously, food insecurity can lead to poor dietary intake and nutritional status and consequently, negative health outcomes due to increased consumption of energy dense and processed foods [1,5,6]. Poor health outcomes include increased risk of chronic disease such as type 2 diabetes and overweight or obesity [1,5,6]. Individuals living in disadvantaged areas in the Yarra Ranges, who are most at risk of food insecurity, are also more likely to have a poorer health status [16]. The prevalence of diabetes has increased significantly (currently 3.2%) in the Yarra Ranges and is an important health issue [16,20]. In the Yarra Ranges, 43.5% of males and 23.8% of females are overweight and 14% of males and 20.2% of females are obese which is similar to the state averages [20]. Hence reducing the prevalence of diabetes and obesity and improving food security are key health priority areas for Yarra Ranges Council [16].

2.3 What is being done to address food security?

Australia has a stable food system in which most Australians are able to access nutritious, safe and affordable food [5,21]. However there is concern from sectors of the community around a number of food-related issues including the future of Australia's food system [21]. A number of national, state and local initiatives have been developed to strengthen the food system [21]. This will help to facilitate responses to future challenges and ensure high quality food is available to all Australians [21].

National level

The Australian Government is in the process of developing a National Food Plan which aims to address factors affecting access to and supply of food at a national level [21]. This document intends to facilitate an integrated, whole-of-food-system approach to addressing future challenges to the Australian food system including population growth, climate change and limited natural resources [21]. The National Food Plan endeavours to ensure Australia has a 'sustainable, globally competitive, resilient food supply that supports access to nutritious and affordable food [21].'

State level

A number of activities which complement the National Food Plan have been implemented in Victoria to improve food security. In 2005 the Food for All program was created in response to the Food Security Investment Plan [1,22]. This program was designed to 'increase regular access to, and consumption of, a variety of foods, particularly fruit and vegetables, by people living in disadvantaged communities [22].' The program focused on key areas such as infrastructure, transport, housing and land use and was successful in increasing awareness and understanding of food security [22]. The Food for All program lad to the development of VicHealth's 'Ten ways that local government can act on food security;' a series of fact sheets containing strategies which can be implemented by local governments when acting on food security [22,23]. These fact sheets assist local governments in establishing or advancing their food security agendas [23].

A number of organisations in Victoria support the efforts of the Victorian Government to reduce food insecurity in the state. The Food Alliance is an organisation which works to ensure sustainable food security and healthy eating in Victoria through improvements to the food and agricultural system [24]. The Food Alliance is comprised of representatives from VicHealth and Deakin University who endeavour to achieve system-wide change [24]. Representatives have experience working across all areas of the food system, from fruit and vegetable production to the supply of food in the public sector [24]. Similarly, the Victorian Local Governance Association (VLGA) is a group comprised of local governments, community groups and individuals which assists to strengthen local governments' capacity to engage with communities and advocate for social change [25]. The VLGA has implemented programs in partnership with local governments to support the development of council strategies and activities which address food security [25].

Local level

What local organisations are doing to address food security?

Interventions which currently address food security in the Yarra Ranges are implemented in major towns, including Healesville, Lilydale, Chirnside Park, Yarra Junction, Upper Ferntree Gully and Monbulk [19]. Interventions include emergency food relief programs and community meals which aim to address short term food insecurity and sustainable interventions aimed at producing long term outcomes including community gardens and kitchens [19]. However, individually these interventions have limited capacity to address the issue of food security in the Yarra Ranges.

A list of identified local organisations and initiatives that assist in addressing food insecurity in the Yarra Ranges is presented in Table 2. This table does not provide an exhaustive list as there is no single reference point providing all current local initiatives. It is possible that some of these interventions are no longer operating.

Table 2. Current local community initiatives assisting to provide food security

Intervention	Location	Explanation of Service Provided
Community Gardens		
Healesville Community Garden	85 River St, Healesville, 3777	Provide residents with the opportunity to access locally grown produce.
Tecoma Community Garden	5 Campbell St, Tecoma, 3160	
Morrison's Community Garden	10 Old Hereford Rd, Mt Evelyn, 3796	
Toolangi Castella Community Garden	Healesville-Kinglake Rd, Toolangi, 3777	
Community Kitchens		
Chirnside Park Community Kitchen Garden	239-241 Maroondah Hwy, Chirnside Park, 3116	Provide residents with the opportunity to improve their cooking skills and share a meal in a social environment.
Golden Wattle	EACH PAG Group Centre Joffre Rd, Healesville, 3777	
Mooroolbark Baptist church	153-157 Hull Rd, Mooroolbark, 3138	
Yarra Valley ECOSS community kitchen	711 Old Warburton Rd, Wesburn, 3797	

Emergency Housing		
Healesville Salvation Army	114 Maroondah Hwy, Healesville, 3777	Provide housing assistance
Mooroolbark – Salvation Army	88 Brice Ave, Mooroolbark, 3138	
Anchor Community Care	7-9 John St, Lilydale, 3140	
Jim Fuller Community House Inc	26 Winyard Dv, Mooroolbark, 3138	
Emergency Food Relief		
Koha Community Café	1-3 Park Rd, Yarra Junction, 3797	A café where anyone can come and have a meal and only pay what they can afford.
Healesville Interchurch Community Care Inc (HICCI)	231 Maroondah Hwy, Healesville, 3777	Network of local Christian churches which provide volunteer services to the local community. Provide emergency food relief and food parcels/vouchers. Organise a weekly social dinner.
Dandenong Ranges Emergency Relief Service (DRERS)	1632 Burwood Hwy, Belgrave, 3160	Emergency Relief – food vouchers, payment of small bills, household goods and assistance with purchasing white goods, clothing vouchers
Salvation Army	88 Brice Ave, Mooroolbark, 3138 114 Maroondah Hwy, Healesville, 3777 1/6 Clarke St, Lilydale, 3140	Provide emergency relief
Anglicare Victoria – Yarra Ranges Family Services	47-51 Castella St, Lilydale, 3140	Emergency relief - food, only for Yarra Ranges area
Careforce Community Services	42-44 Castella St, Lilydale, 3140	Provide emergency food relief and budgeting assistance
Upper Room Food Bank	Level 1, 106 Main St, Lilydale, 3140	Food bank
Monbulk Care Network	61-63 Main Rd, Monbulk, 3793	Provide food hampers and welfare assistance
Monbulk Christian Fellowship	84B Old Emerald Rd, Monbulk, 3793	Provide food hampers
Valley Community Care	3/10 Nester Rd, Woori Yallock, 3139	Provide emergency food relief
LinC Church Services Network Inc.	Cnr Hoddle St and Warburton Hwy, Yarra Junction, 3797	Provide emergency food and transport services
Mission Impossible	1623 Burwood Hwy, Belgrave, 3160	Food donations
Kilsyth Baptist Church	382-388 Liverpool Rd, Kilsyth, 3137	Food bank
Lilydale CIC	214 Main St, Lilydale, 3140	Emergency food relief
The Mustard Room – Lilydale Baptist Church	3/28 John St, Lilydale , 3140	Emergency food relief
River Valley Careworks	Shop 1 Millgrove Shops, 3039 Warburton Hwy, Millgrove, 3799	Food parcels, frozen meals, financial assistance
Yarra Valley Vineyard Christian Fellowship	60 Cavehill Rd, Lilydale, 3140	Food parcels
Hope City Mission	101 Manchester Rd, Mooroolbark, 3138	Food bank
Hope on Fridays	3 Clifford Grove, Tecoma, 3160	Emergency food relief

Transport Services		
Bridges Connecting Communities Ltd	658 Mountain Hwy, Bayswater, 3153	Volunteer Driving Service covering Knox and part of Yarra Ranges - transport to doctors, hospitals and support groups
Eastern Volunteer Resource Centre Inc	Ground Floor, Suite 1/36 New St, Ringwood, 3134	Volunteer transport service for eligible elderly/disabled residents of fringe suburbs of Yarra Ranges
LinC Church Services Network Inc - Yarra Valley	Shire Building, Cnr Hoddle Street and Warburton Highway Yarra Junction, 3797	General transport service for those in need
Upper Yarra Assisted Transport	Yarraburn Centre, 1-3 Park Rd Yarra Junction, 3797	Personalised transport service for frail aged, people with dementia and people with disabilities unable to access existing transport
Yarra Ranges Community Access Project	231 Maroondah Hwy, Healesville, 3777	Transport project to identify unmet services and needs for all HACC clients across the Shire in collaboration with other Transport services providers.

Outer East Health and Community Support Alliance and Nourish Network

The Outer East Health and Community Support Alliance (OEHCSA) is a partnership between agencies from Knox, Maroondah and the Yarra Ranges committed to improving the health and wellbeing of the community [26]. A key priority area for OEHCSA is to 'promote access to nutritious food [26].' OEHCSA has a working group known as the Nourish Network consisting of dietitians and health promotion workers which facilitates research into food security in the outer east in response to the 2009-2012 Health Promotion Catchment Plan [26].

In 2008, the OEHCSA conducted a report in conjunction with the Nourish Network and Monash and Deakin Universities. Titled 'Outer East Community Food Access Research Project: Food security assessment and plans for a way forward,' this report investigated food security in the outer east [13]. The report identified at risk communities and determinants of food security, and information was used to suggest strategies to improve access to nutritious food [13]. A similar report was conducted in 2011 to reassess food insecurity in the outer east [19]. Information gained from the 2008 and 2011 research has demonstrated a need for the development of a strategic approach to address food security, starting with this project [13,19,26]. Members of the Nourish Network had an advisory role throughout this project, assisting where required.

What Yarra Ranges Council is currently doing to address food security?

Local governments have a key role to play when it comes to addressing food security. A literature review suggests that local governments can act in a number of key areas to address food security including [27]:

- Dietary education
- Food safety
- Land use planning
- Transport planning
- Advocacy
- Coordination of food-related initiatives
- Institutional purchasing
- Land use and regulation of standards
- Management of public land

The Yarra Ranges Council has displayed a commitment to act on food security in the Yarra Ranges. A number of key council policies and plans from various departments have outlined vision statements and strategies which demonstrated a commitment to addressing food security in the municipality. The following table outlines the council policies and plans that consider food security.

Table 3. Yarra Ranges Council Policies/Plans that consider food security

Council Policy/Plan	Policy Focus on Food Security	Current Activities
Community Wellbeing Plan – Municipal Public Health Plan 2010-2013 [16]	• Reduce food insecurity within the municipality by improving access to, and the affordability of nutritious food • Increase consumption of healthy foods and reduce consumption of unhealthy foods amongst residents	• Development of a food security policy directions paper
Vision 2020 Community Plan [28]	• Ecological sustainability – including localising food production and sourcing • Farming – acknowledgement of the key role of agriculture and greater encouragement of local food production • Strong, healthy and connected communities	• Key strategic action areas acknowledged in other council policies
Council Plan 2009-2013 [29]	• Active and engaged communities • Vibrant economy, agriculture and tourism	• Support for agribusiness • Partnerships with the agriculture sector • Encouragement of an adequate supply of seasonal workers • Advocacy for recycled water pipeline to improve water security
Policy and Action Plan for and with Young People [33]	• Enhance the health and wellbeing of young people	
Positive Ageing Strategy [32]	• Support older people to lead independent, active, healthy lives	• Advocacy for community and improved public transport and affordable housing • Improved footpaths to increase access to shops and services

Aged and Disability Services – HACC [31]	• Assistance for individuals to remain in their own homes and stay connected with their community	• Meals on Wheels • Planned Activity Groups • Community Transport
2012-2022 Economic Development Strategy [30]	• Preserve rural land for agricultural purposes • Support local food supply chains and distribution networks • Improve water security • Support initiatives to ensure a sustainable supply of skilled and seasonal labour • Encourage harmonious relationships between tourists and residents, the environment and agribusiness.	• Business case to establish a recycled water pipeline • Support of industry cluster groups including Agribusiness Yarra Valley and the Yarra Valley Regional Group which provide information about local agriculture and represent the views of agribusinesses in the Yarra Ranges
Family and Children's Strategy and Action Plan [34]	• Promotion and maintenance of the health of children	• Work with early childhood and family service providers and schools to encourage and assist the establishment of health programs (e.g. nutrition programs and school lunch strategies)
Environment Strategy [35]	• Protect the integrity of the green wedge and urban growth boundary to protect biodiversity and preserve high value land for purposes such as agriculture. • Support communities to adopt sustainable land management principles	• Advocacy for a recycled water pipeline to the Yarra Valley to improve water security • Employment of an agribusiness officer
Green Wedge Management Plan [36]	• Encourage and support sustainable farming • Provide a secure, long term future for productive and sustainable agriculture within the Green Wedge	• Reduced rates for properties where land is used for farming • Support for Agribusiness Yarra Valley • Ensure planning controls seek to maintain a sustainable farming sector • Work with local authorities to increase the amount of recycled water used in agriculture
Community Climate Change and Peak Oil Action Options 2012-2022: Community Action Plan [37]	• Improve food security across the Yarra Ranges • Develop food security policies and action plans to promote food security in light of climate change and peak oil risk. • Identify opportunities for the establishment of community gardens • Conduct evidence based research to evaluate links between community interventions, community health, climate change and peak oil adaptation. • Investigate opportunities for council to support and encourage community gardens, rooftop gardens, gardening courses, skills training and the growing of vegetables in backyards • Expand kitchen gardens in early development and child care services • Investigate feasibility of setting up markets for community supported agriculture schemes • Protect green wedge areas • Promote farmers markers • Develop regional food brands and encourage local production for local consumption • Review open space and street scape tree planting policies with the view of promoting edible landscapes	• Support for agribusiness • Partnerships with the agriculture sector • Employment of an agribusiness officer • Development of a food security policy • Advocacy for a recycled water pipeline to the Yarra Valley to improve water security

This table does not provide a comprehensive list as only publically available policies were included. The exception to this was the Community Climate Change and Peak Oil Action Options 2012-2022 Plan which was provided by a council member. It contained valuable information about possible actions Yarra Ranges Council could take to address food security and was therefore deemed important to include in the above table.

Other municipalities have food security policies

The following Victorian municipalities have publically available food security policies:

- Hobsons Bay City Council [38]
- City of Darebin [39]
- Maribyrnong City Council [40]
- City of Melbourne [41]
- City of Casey [3]

Hobsons Bay, Maribyrnong, Darebin and Melbourne have implemented their policies whilst Casey's draft food security policy was recently released for public comment. Whilst Melbourne's policy is not a food security policy specifically it does contain a section on food security.

2.4 Why a Food Security Policy for the Yarra Ranges?

What is public health nutrition policy?

Public health nutrition policy is defined as 'a statement of values, beliefs and intentions towards shaping the food and nutrition system to achieve a public health nutrition outcome [42].'

How does policy relate to public health nutrition?

Public health nutrition provides a socio-ecological or upstream approach to nutrition practice, which focuses on using interventions to address the determinants of health [43]. A core activity of public health nutrition is health promotion [44], defined as 'the process of enabling people to increase control over, and to improve, their health [45].' The World Health Organisation (WHO) outlined 'building healthy public policy' as one of the five key action areas in the Ottawa Charter for Health Promotion (1986) [45]. As the aim of this action area is to create an environment that enables people to live a healthy life [44], policy provides a population approach to health promotion, contributing to 'settings and supportive environments' on the health promotion continuum (outlined in figure 1, below) [46]. In the context of food security, policy is a long-term, upstream approach that aims to encompass a wide range of determinants that have an impact at a population level [5].

Figure 1. The health promotion continuum

Figure directly from: Palermo C. Public health nutrition lecture 1: introduction [unpublished lecture notes]. BND3082: Public Health Nutrition, Monash University; lecture given 2011 Mar 11.

Why is a food security policy important for local government?

According to the Victorian Health Promotion Foundation (VicHealth) local government is ideally positioned to address food security [22]. Outcomes from VicHealth's 'Food for All 2005-10' project identified incorporating food security into council policy and plans as one of '10 ways local government can act on food security [24].' VicHealth justified that integrating food security into council policy allows a long term, systematic and proactive approach to addressing food security [47].

Why is a food security policy important for the Yarra Ranges Council?

A policy provides strategic direction and a framework for future action [43] on food security in the Yarra Ranges, informing priorities to best achieve the long term outcome of improving food security in the community. Having a policy not only increases council's capacity to respond appropriately to the issue, but also ensures that the issue is managed systematically across all council departments [47].

Whilst there are a number of existing government food security policies, it is important that Yarra Ranges Council has a municipality specific policy that is reflective of its unique characteristics, in order to be sustainable and effective in facilitating change. A food security policy addresses the council's Municipal Public Health Plan (2010-2013) priority area of 'supporting residents to achieve and maintain a healthy lifestyle' which explicitly encompasses reducing food insecurity, and will ultimately assist to maintain and improve the health of those residing in the region, both now and in the future [5,16].

2.5. Yarra Ranges Council's Visions and Principles

The Yarra Ranges Council's vision, mission statement and values highlight the core organisational responsibilities of the council itself, as well as the aims that it hopes to achieve for the community [29]. These are outlined below. The content of the proposed food security policy options paper must therefore reflect the core values and mission statement of Yarra Ranges Council whilst facilitating positive outcomes which will address the council's vision.

Vision

'Yarra Ranges will be a vibrant and dynamic municipality, based on strong local communities living in a place of great natural beauty [29].'

'Our world class municipality will be sustained by a strong local economy and a rich social fabric that is consistent with and supports its environmental values [29].'

Mission statement

Yarra Ranges Council:

- is a collective voice for its people,

- builds healthy, connected and viable communities,

- protects and enhances the natural environment,

- provides transparent, accountable and participatory local democracy [29]

Values

The Yarra Ranges Council has a number of core values which are outlined in the figure below [29].

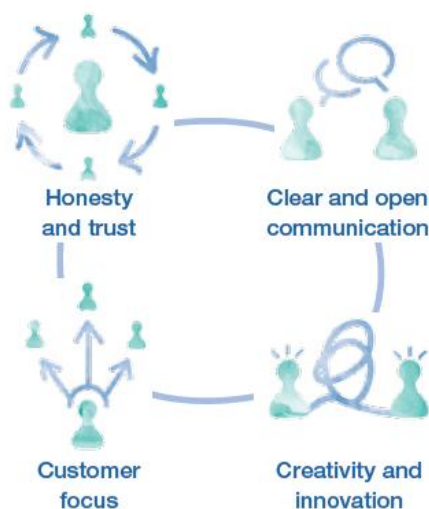**Figure 2. Yarra Ranges Council's Values**

Figure directly from: Yarra Ranges Council. Council Plan 2009-2013: 2012 update. Lilydale: Yarra Ranges Council; 2012.

Sustainable Excellence Principles

The Yarra Ranges Council applies sustainable and excellence principles to its everyday work [29]. They are adapted from the Australian Business Excellence Framework [29]. These principles assist to facilitate outcomes which are sustainable for Yarra Ranges Council and the community [29]. The principles are [29]:

- Leadership

- Community and customers

- Systems thinking

- People

- Continuous improvement

- Information and knowledge

- Corporate and social responsibility

- Sustainability

The food security policy options paper must therefore seek to improve Yarra Ranges Council's ability to provide leadership in addressing this issue, to understand the community's thoughts regarding food security and to consider the factors which influence food security [29]. It also needs to understand the role of community and its capacity to address this issue, to facilitate long term and sustainable actions outcomes, act responsibly and provide council with adequate information to make informed and strategic decisions in response to this issue [29].

The Council Plan and Vision 2020

The Council Plan and Vision 2020 are important strategic documents that must be considered when developing a food security policy for the Yarra Ranges Council [28,29]. Vision 2020 is a shared vision of the Yarra Ranges community [28]. It provides future directions for the community and is well supported by council and other key stakeholders in the community [28]. Vision 2020 contains seven key themes. These are strong, healthy and connected communities; environmental stewardship; built environment; local economy and tourism; arts, culture and heritage; a living and learning community and a safe and accessible shire [28]. The Yarra Ranges Council has a number of strategic objectives within its council plan which outlines the vision for the Yarra Ranges [29]. Key objectives include: active and engaged communities; quality community infrastructure; protected and enhanced natural environment; vibrant economy, agriculture and tourism and high performing organisation [29]. Refer to figure 2 for more information [29]. Therefore a policy designed to address food security in the Yarra Ranges needs to reflect the aspirations and strategic directions of Vision 2020 and the Council Plan.

Strategic Objectives

Figure 3. Yarra Ranges Council's Strategic Objectives

Active and Engaged Communities
A resilient, healthy, active community that is safe and has opportunities and access to quality services.

Quality Community Infrastructure
A built environment where facilities and infrastructure meet current and future needs.

Protected and Enhanced Natural Environment
A healthier environment for future generations.

Vibrant Economy, Agriculture and Tourism
A sustainable and prosperous economy that supports local enterprise.

High Performing Organisation
A great place to work where innovation is expected and customers are our focus.

Figure directly from: Yarra Ranges Council. Council Plan 2009-2013: 2012 update. Lilydale: Yarra Ranges Council; 2012.

3.0 Method

The bi-cycle model of public health nutrition practice was chosen as the program planning model to inform this project. This project mainly focused on completing the eight steps of the first phase; intelligence [43]. However, later stages of the project started to contribute to the action phase; specifically step 9 'writing statements for action' and step 10 'logic modelling [43].' Refer to appendix 2 for further information on the bi-cycle model.

3.1 Literature Review

Due to time constraints and limited availability of high quality scientific literature a non-systematic literature review was conducted. The following search topics (seen in table 4) were deemed relevant to the development of a policy. These included food security frameworks, determinants of food security, key themes in existing food security policies and identifying the policy development processes used to create a food security policy. Findings of the literature review will inform the development of a food security policy and food security policy directions paper for the Yarra Ranges Council.

Table 4. Summary of literature review

Literature search topic	Key words used	Action taken from literature search

Food security frameworks	Food security, food insecurity, policy, framework, frame, conceptual model, determinants, food access, food supply	**Search Strategy**
		• Databases: Cochrane Database, RURAL and Ovid
		• Electronic journals:
		  o Public Health Nutrition
		  o International Journal Public Health
		  o Australia and New Zealand Journal Public Health
		  o British Journal of Nutrition
		  o Australian Journal of Nutrition and Dietetics
		• Snowballing (using references of other documents)
		• Google Scholar
		• Known Policy Papers
		
		Analysis
		• Each framework was analysed to identify advantages and disadvantages and to identify whether the framework was relevant to the Yarra Ranges (Refer to appendix 3)
		• Strongest four frameworks were identified
		
		Decision making
		• Findings were presented to members of the Nourish Network for feedback
		• Most relevant framework was identified and utilised

Determinants of food security	Food security, food insecurity, determinants, food supply, food access, Shire of Yarra Ranges, Yarra Ranges Council	**Search Strategy**
		• Databases: Scopus
		• Electronic journals:
		  o Public Health Nutrition
		  o Journal Human Nutrition and Dietetics
		  o Journal Urban Health
		  o Australia New Zealand Journal Public Health
		  o Nutrition Reviews
		  o Health and Place
		  o Health Education Research
		  o Health Promotion Journal Australia
		  o Appetite
		  o Annual Review Public Health
		  o Journal American Dietetic Association
		• Snowballing
		• 2008 Outer East Community Food Access Research Project: Food Security Assessment and Plans for a Way Forward
		• 2011 Student Report Nourishing the Body and Mind: Reassessing Food Insecurity in the Outer East

		Analysis • Identification of common determinants of food security • Grouping of common determinants under two main headings: food supply and food access • The 2008 and 2011 reports were used to identify determinants of food security that were specific to the Yarra Ranges • Key determinants were grouped together in a pictorial representation • Results from the determinant analysis was used to inform questions used for the community consultations
Themes in current local, state, national and international food policies	Policy, food, food insecurity, food security, options paper, draft food policy, local food policy, state food policy, national food policy, international food policy	**Search Strategy** • Google search engine • Known policy papers • Snowballing **Analysis** • Local, state, national and international food policies, draft food policies and policy options papers were identified • Key themes within each policy were identified (Refer to appendix 4) • Key themes were grouped to identify the most popular themes • Key themes were used to inform stakeholder consultations and the development of a food security policy directions papers for the Yarra Ranges Council
Policy development process for a food security policy	Public health promotion, public policy, program planning, policy development	**Search Strategy** • Google search • Text book search • Identification of municipalities who had food security policies • Contact was made via email/phone with individuals involved in the development of food security policies for other Victorian municipalities **Analysis** • Text books were searched to identify key information about policy development • Key questions were asked to determine the policy development process of each council

3.2 Stakeholder Analysis

A stakeholder analysis was conducted to identify all potential stakeholders in the project and determine which of these were most important to consult with. Using contacts suggested by Nourish Network members and the Yarra Ranges Council, as well as those identified using the Yarra Ranges online community directory; potential stakeholders were identified and listed. Stakeholders were then grouped as being subjects, players, bystanders or actors based on their power and interest in the project using a stakeholder analysis grid [48].

Snowball sampling was then utilised throughout the duration of the project as a means of identifying further stakeholders that may have been missed during the initial stakeholder analysis. Snowball sampling involved identifying further stakeholders by asking information rich individuals if they believed any additional people should be contacted [49].

3.3 Stakeholder Consultations

The following steps outline the actions taken to complete stakeholder consultations:

1. Create questions for stakeholders

Three sets of open ended guided questions were created, one for fruit and vegetable producers, one for fruit and vegetable retailers and one for the remaining stakeholders. They were trialled during the first focus group and revised prior to further consultations. The questions are provided below.

Questions for Council & Community Members

- Statement: VicHealth defines food security as 'the state in which all persons can obtain nutritionally adequate, culturally acceptable, safe foods through non-emergency food sources [1].'
- Based on this definition, what do you think affects food security in the Yarra Ranges?
- What do you think council can do to address food security on a community level? Would this be appropriate to be included in a policy?
- What is your vision regarding food security in the Yarra Ranges? What would you like to see in the future?
- Are there any additional things you would like to discuss?
- Can you suggest anyone else who would have useful input for us?

Questions for Fruit and Vegetable Producers / Farmers

- Statement: VicHealth defines food security as 'the state in which all persons can obtain nutritionally adequate, culturally acceptable, safe foods through non-emergency food sources [1].'
- What are your thoughts on the current availability of fresh produce in the area?
- Do you feel it is important to be able to supply your produce directly to the local community and why?
- What could be done to improve the supply of fresh produce in the Yarra Ranges?
- What do you think council can do to address food security on community level?
- What do you see as the future of food production in the Yarra Ranges?
- What do you believe your role is in the food system and ensuring food security?

<u>Questions for Fresh Produce Retailers</u>

- Statement: VicHealth defines food security as 'the state in which all persons can obtain nutritionally adequate, culturally acceptable, safe foods through non-emergency food sources [1].'
- What are your thoughts on the current availability of fresh produce in the Yarra Ranges?
- Do you use any local growers to stock your store? Can you tell me why do you do that?
- Do you feel it is important to be able to purchase your produce directly from local suppliers and why?
- What could be done to improve the supply of fresh produce in the Yarra Ranges?
- What do you think council can do to address food security on a community level?
- What do you see as the future of food production in the Yarra Ranges?
- What do you believe your role is in the food system and ensuring food security?

2. Contact stakeholders to arrange consultations

A range of stakeholders, identified as having high power and/or high interest from within council and the community, were contacted and invited to participate in the project. Players and selected subjects were contacted via telephone and/or email, to arrange a face-to-face consultation with two representatives from the group.

3. Undertake the allocated consultation method

Focus groups and semi-structured interviews were utilised for qualitative data collection. The type of method used was dependent on the availability of stakeholders and their perceived understanding of food security. The allocated length of the consultations varied from half an hour for interviews, to an hour for focus groups. Written explanatory statements were provided to all participants. Consent to participate in the consultation and consent for it to be recorded was gained.

4. Perform thematic analysis

Using a thematic analysis approach, each researcher interpreted their recorded consultations and analysed for codes. Codes were then grouped into categories. The individuals involved in each consultation then compared and discussed their categories and created a final set. The final categories from each consultation were then grouped into themes. Strategies identified throughout consultations were also collected.

5. Identify final policy document themes

The final policy document themes were identified by comparing the themes with the results of the literature reviews. The themes that emerged from the thematic analysis of the stakeholder consultations were compared with the themes that exist in other food security policies in Victoria to ensure that any vital and relevant themes in the literature were not overlooked. Additionally, the themes were compared with the results from the framework and determinants literature review to ensure the themes from the consultation incorporated all relevant aspects of food security.

3.4 Process for Developing a Food Security Policy

Findings from the literature review and stakeholder analysis and consultations were used to inform the development of a process for creating a food security policy.

4.0 Results

4.1 Literature Review

The results from the literature review are outlined below.

Food Security Frameworks

Twenty-two pieces of literature were included from publications dating from 1991 to 2011. Eighteen food security frameworks were identified. Four key frameworks were identified which were most relevant to the Yarra Ranges. These are shown below and explained in more detail in appendix 3. Option 1 was chosen as the framework that would underpin the food security policy and food security policy directions paper.

Figure 4. Option 1- Framework demonstrating potential impacts on food security
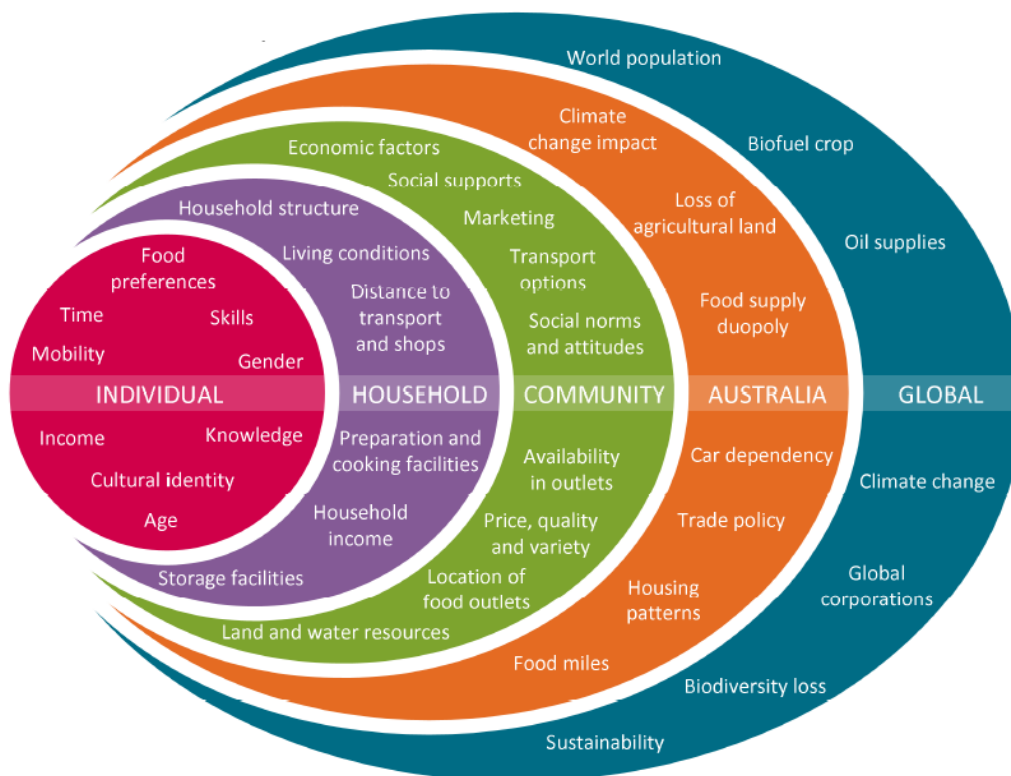
Figure directly from: Maribyrnong City Council. Food Security Policy 2011-2013 [monograph on the internet]. Maribyrnong: Maribyrnong City Council; 2011 [cited 2012 Aug 23]. Available from: http://www.maribyrnong.vic.gov.au/page/Page.aspx?Page_id=319.

Figure 5. Option 2 - Determinants of food security

Figure directly from: Rychenik L, Webb K, Story L, Katz T. Food security options paper: A planning framework and menu of options for policy and practice interventions [monograph on the Internet]. Sydney: NSW Centre for Public Health Nutrition; 2003 [cited 2012 Aug 25]. Available from: http://www.health.nsw.gov.au/pubs/2003/pdf/food_security.pdf

Figure 6. Option 3 - Determinants of food security
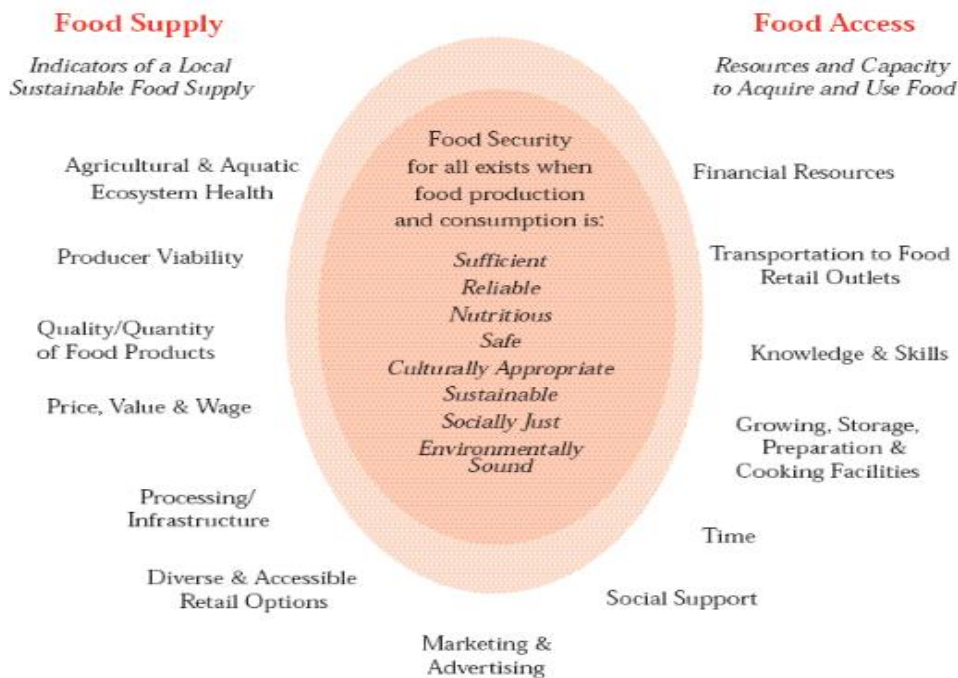
Figure directly from: Nova Scotia Participatory Food Costing Project. Nova Scotia participatory food costing project - Food security for all: Building capacity for policy change [homepage on the Internet]. Halifax, Nova Scotia (Canada): Mount Saint Vincent University; [updated 2009 Apr; cited 2012 Aug 26]. Available from:http://faculty.msvu.ca/foodsecurityprojects/Food%20SecurityDeterminants.htm

Figure 7. Option 4 - Perspective of food security
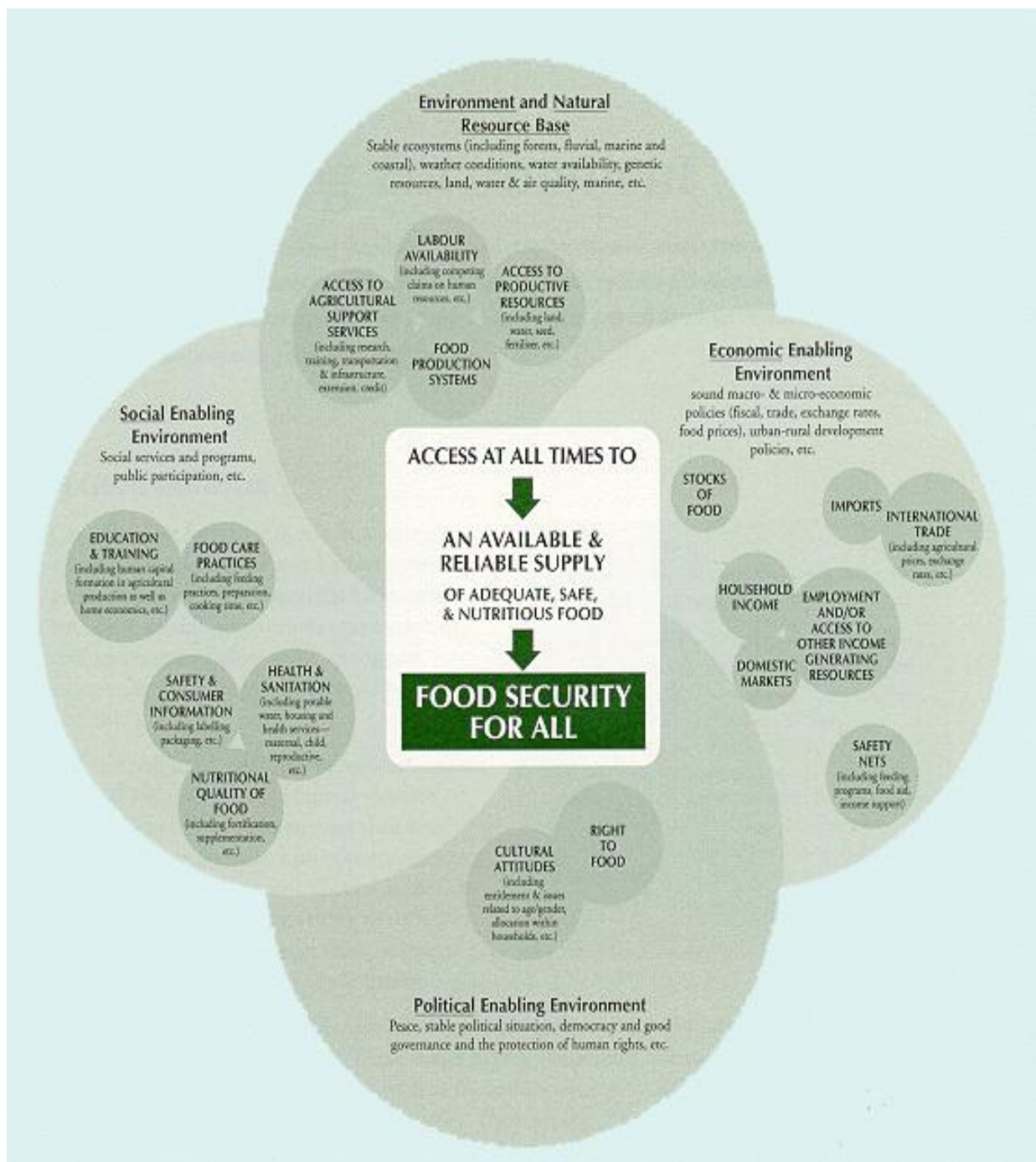
Figure directly from: Canadian Government Agriculture and Agri-food. Canada's Action Plan for Food Security 1998 [monograph on the internet]. Ontario Canada: Canadian Government Agriculture and Agri-food; 1998 [cited 2012 Sept 10]. Available from: http://www.agr.gc.ca/index_e.php?s1=misb&s2=fsec-seca&page=action

Determinants

Twenty-three pieces of literature were included from publications dating from 2000 to 2012. The results from the literature search are presented in figure 8. Determinants of food security are commonly categorised into two groups: food supply and food access. Food supply includes quality of food, promotion, cost of food, location of food outlets, availability in food outlets and variety. Food access includes social support, knowledge, skills and preference, convenience, preparation and cooking facilities, time and mobility, distance and transport to shops, financial constraints and expenses, as well as storage facilities.

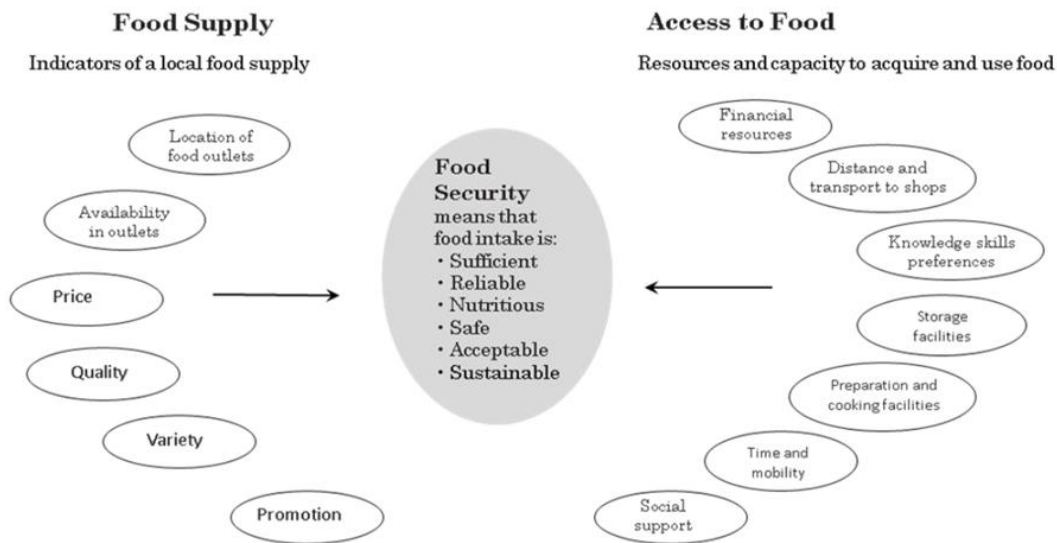**Figure 8. Pictorial representation of determinants of food security**
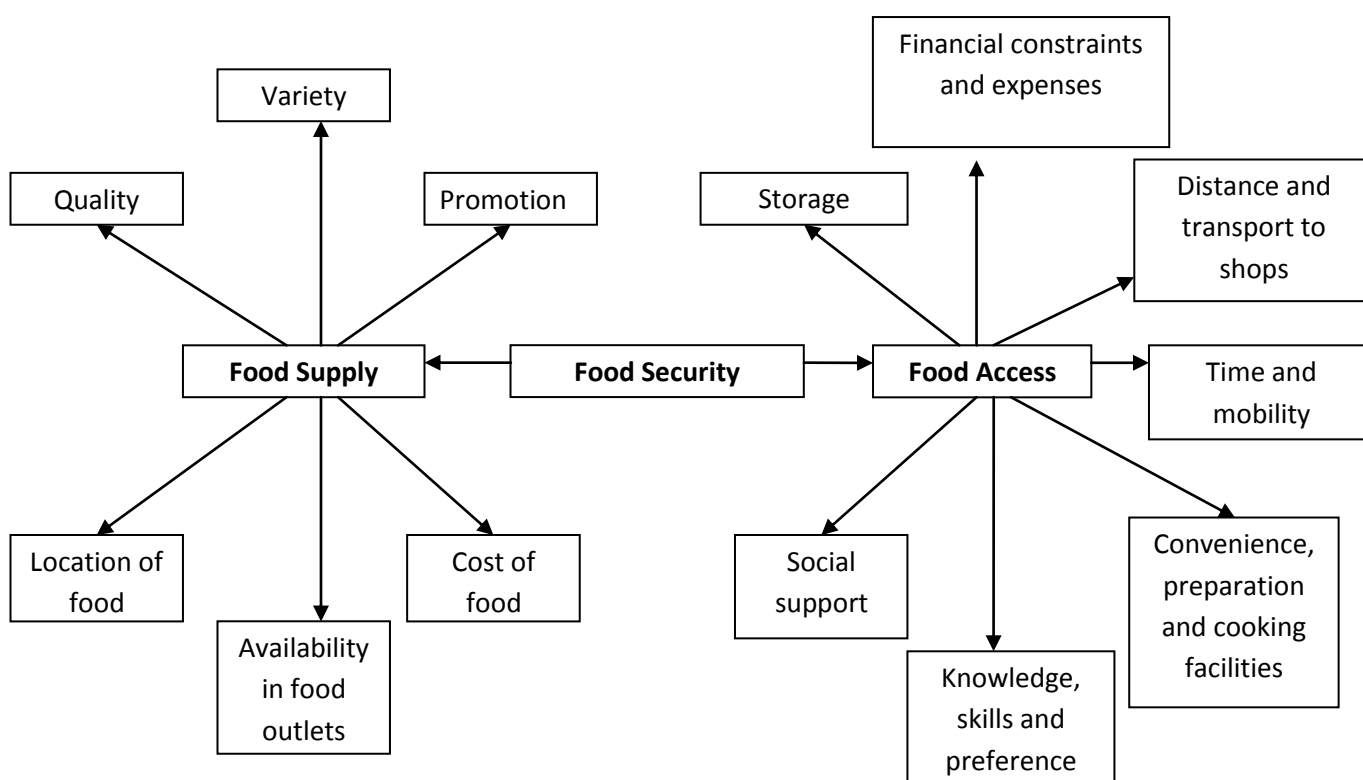
Figure adapted from: Rychenik L, Webb K, Story L, Katz T. Food security options paper: A planning framework and menu of options for policy and practice interventions [monograph on the Internet]. Sydney: NSW Centre for Public Health Nutrition; 2003 [cited 2012 Aug 25]. Available from: http://www.health.nsw.gov.au/pubs/2003/pdf/food_security.pdf

Themes in existing food security policies

In total, 10 food security policies were located, with dates ranging from 1998 to 2012. Eleven key themes were identified. This data can be found in table 5.

Table 5. Key themes in existing food security policies

Key theme	Explanation	Policies that each theme was found in
Education	Developing initiatives that increase knowledge of food, food preparation and production of environmentally sustainable food [5,38,39,50]	Hobsons Bay City Council's Food Security Policy [38], Scotland's National Food and Drink Policy [50], NSW Policy Options Paper [5], City of Darebin Council's Food Security [39]
Research, monitoring and evaluation	Remaining up to date with trends and evidence regarding food security, as well as commissioning and monitoring local research into food security [5,40,51]	Maribyrnong City Council's Food Security Policy [40], NSW Policy Options Paper [5], Canada's Action Plan for Food Security [51]
Sustainability	Reducing the negative environmental impacts of the food system [3,41, 51,52,53]	City of Melbourne's Food Policy [41], Canada's Action Plan for Food Security [51], Vancouver's Food Charter [52], Tasmania's Food and Nutrition Policy [53], City of Casey's Draft Food Security Policy [3]
Support during emergency situations	Assisting residents to access food in times of need [5,38,51,53]	Hobsons Bay City Council's Food Security Policy [38], Canada's Action Plan for Food Security [51], Tasmania's Food and Nutrition Policy [53], NSW Policy Options Paper[5]
Urban planning	Creating an environment that protects residents from food security through land use, town planning, economic development and infrastructure [3,5,38,39,40,51]	City of Casey's Draft Food Security Policy[3], Maribyrnong City Council's Food Security Policy[40], Hobsons Bay City Council's Food Security Policy[38], Canada's Action Plan for Food Security[51], NSW Policy Options Paper[5], City of Darebin's Food Security Policy[39]
The relationship between food, nutrition and health	Increasing availability of healthy food and encouraging healthy eating practices to support the wellbeing of people now and into the future [38,41,50,53]	Melbourne City Council's Food Policy[41], Hobsons Bay City Council's Food Security Policy[38], Scotland's National Food and Drink Policy[50], Tasmania's Food and Nutrition Policy[53]
Collaboration with other governments and organisations	Working with other local, state and federal governments, as well as community groups and businesses to address food security issues [3,5,39,40,52]	City of Casey's Draft Food Security Policy[3], Maribyrnong City Council's Food Security Policy[40], NSW Policy Options Paper[5], City of Darebin's Food Security Policy[39], Vancouver's Food Charter[52]
Building community resilience	Enhancing future food security and increasing the ability of the community to overcome future food security challenges [3,39,40,41,50]	Melbourne City Council's Food Policy[41], Maribyrnong City Council's Food Security Policy[40], City of Darebin's Food Security Policy[39], City of Casey's Draft Food Security Policy[3], Scotland's National Food and Drink Policy[50]
Supporting local farming and agriculture	Supporting local farming and agriculture to improve availability, variety and quality of food [3,5,41,50,52,53]	City of Casey's Draft Food Security Policy[3], Melbourne City Council's Food Policy[41], Scotland's National Food and Drink Policy[50], NSW Policy Options Paper[5], Vancouver's Food Charter[52], Tasmania's Food and Nutrition Policy[53]
Supporting the food and drink industry	Supporting food and drink businesses while encouraging good quality, healthy, environmentally sustainable products [3,5,50,53]	NSW Policy Options Paper[5], Tasmania's Food and Nutrition Policy[53], Scotland's National Food and Drink Policy[50], City of Casey's Draft Food Security Policy[3]
Advocating for food security	Advocacy by governments and key stakeholders for resources, policy direction and legislative changes to increase food security [3,5,38,39,40]	NSW Policy Options Paper[5], City of Casey's Draft Food Security Policy[3], Maribyrnong City Council's Food Security Policy[40], Hobsons Bay City Council's Food Security Policy[38], City of Darebin's Food Security Policy[39]

Policy Development Process

Five municipalities who had existing food security policies* and two state organisations with an interest and involvement in food security policy (VicHealth and VLGA) were contacted. The five Victorian councils contacted were: City of Melbourne, City of Darebin, Hobsons Bay City Council, Maribyrnong City Council and City of Casey. From the literature search, two textbooks with a brief outline of the policy development process were identified [44,54].

Despite the City of Melbourne having a broad food policy, rather than just a food security specific policy, it was deemed appropriate to be included as it had one section specifically addressing food security which increased the evidence base available.

The development process described was as follows:

1. Problem identification and issue recognition: Defining the problem and identifying which issues will and will not be on the policy agenda, and why.
2. Policy formulation: Creation of the policy and identifying what future actions are required.
3. Policy Implementation: Implementing an action plan and enforcing the policy
4. Policy Evaluation: Monitoring whether the policy is achieving the set objectives and whether it has any unintended outcome.

From the five Victorian shires contacted, replies were received from staff from Maribyrnong City Council, City of Darebin and City of Melbourne. Table 6 below outlines a summary of the policy development process described by the shire specific policy documents, as well as additional information provided by staff involved in the development process.

Table 6. Policy development process described by Victorian municipalities who have food security policies

Policy	Consultation processes used	How draft policy was developed after consultation	Direction and action taken once draft policy developed	Other important information provided
City of Darebin	Internal Engagement on[39]: • Current initiatives • Scope for future action • Development of a working group Community Survey on[39]: • Access to food • Purchasing habits • Barriers to food security • Food growing	• Analysis of consultation results [39] • Development of food security framework[39] • Development of draft food security policy[39]	• Input on policy and key action areas [39] • Development of final policy [39] • Establishment of ongoing steering group [39] • Marketed food policy internally and externally [39] • Ongoing evaluation of implementation effectiveness [39] • Review process after four years [39]	• Timeframe for policy development - 3 years* *Melissa Morrison, personal communication, 2012 Sept 25

Hobsons Bay City Council	<u>Internal Consultation on</u>[55]: • Current work being undertaken • Possible future directions • Actions the council should take • Expression of interest for council working group <u>Community Survey on</u>[55]: • Important factors in food access • Ways to improve access to food <u>Consultation sessions with residents and organisations on</u>[55]: • Current initiatives • Factors affecting food access • Possible actions to improve food access	• No information available	• No information available	• No information available
Maribyrnong City Council	• Used evidence base and literature to inform questions for consultation* • Conducted internal council consultation, then community consultation* • Community consultation focused on individuals and groups most vulnerable to food insecurity [56] • Methods of consultation: vox pop, electronic survey and focus groups [56] *Nicole White Maribyrnong City Council, personal communication, 2012 Sept 20	• Data collected was analysed and key themes identified to form the basis of the draft policy* *Nicole White Maribyrnong City Council, personal communication, 2012 Sept 20	• Draft policy presented to council and released for consultation and public comment for five weeks [56] • Results from consultation and public comment were used to inform the final policy [56] • Council endorsed the policy for a three year period [56] • An action plan for implementation of the policy is developed yearly to reflect the current needs of the community* • The policy and subsequent action plan are evaluated on a regular basis to ensure objectives are being met* *Nicole White Maribyrnong City Council, personal communication, 2012 Sept 20	• Policy objectives written at a strategic level to address the social determinants of health • The policy has an integrated approach across all council departments* *Nicole White Maribyrnong City Council, personal communication, 2012 Sept 20

City of Casey	• No information available	• No information available	• Draft policy released for public comment for five weeks, including an outline of three key questions to be considered when providing comment [3] • Comments provided are currently being used to inform the final policy and future implementation strategies [3]	• No information available
City of Melbourne	Three rounds of consultation were used over six months:* 1st round: Discussion paper • A food policy discussion paper (developed by external consultants) was released for public comment • Dissemination methods included posting the paper online and emailing to identified stakeholders 2nd round: Postcard survey • 10,000 postcards sent to various residents and businesses and put in community health care centres • Postcard contained two survey questions about the meaning of food and issues surrounding food 3rd round: Forums • Three discussion forums were held, one internal and two external * Melissa Morrison City of Melbourne , personal communication, 2012 Sept 25	• Consultation results analysed thematically to produce key commitments/ themes* • External consultants re-engaged to develop the draft policy* * Melissa Morrison City of Melbourne , personal communication, 2012 Sept 25	• Draft policy presented to council to be endorsed and released for public comment for four weeks* • Dissemination methods for public comment on draft policy* • Mailed to people who were previously engaged in consultation process and had expressed interest in continued involvement* • Draft food policy 'conversation session': an event where people were invited to a central location to speak to staff, and provide comment* • Online feedback survey* • Feedback from public comment integrated into final policy by consultants* • Final policy endorsed by council* • A food policy action plan is currently being developed [41] • The council plans to regularly evaluate the effectiveness of the policy [41] * Melissa Morrison City of Melbourne , personal communication, 2012 Sept 25	• Timeframe for policy development - 18months* • Ensures that the project has a solid plan, timeline and project brief in place to oversee the entire process* • Two internal governance groups were used to oversee the project: an advisory group and a steering committee* * Melissa Morrison City of Melbourne , personal communication, 2012 Sept 25

Figure 9. Summary of policy development process described by other municipalities

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│              Establishment of need              │
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│   Development of a steering group and advisory group   │
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│                 Literature Search               │
│          •defining the issue in the region       │
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│          Development of a background paper        │
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│               Community consultation             │
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│                Consulation analysis              │
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│              Draft policy development            │
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│                 Community input                  │
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│                Policy development                │
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│                Policy endorsement                │
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│    Development of an action and evaluation plan   │
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4.2 Stakeholder Analysis

The stakeholders identified during the analysis and the category they were classified into is presented below in Table 7.

Table 7. Identified Stakeholders and their classification as either subjects, players, actors or bystanders.

Subjects – High Interest, Low Power	Players – High Interest, High Power
Emergency Food Relief: • Red Cross, Koha Special Café, HICCI, DRERS, Salvation Army, Anglicare, Careforce Community Services, Upper Room Foodbank, Monbulk Care Network, Valley Christian Fellowship inc, Melba Community Support Program, Yarra Valley ECOSS. Community Kitchens: • Chirnside Park Community Kitchen garden, Healesville Men's, Golden Wattle, Mooroolbark Baptist Church, Yarra Valley ECOSS. Emergency Housing: • Anchor Community Care, Salvation Army, Jim Fuller Community House Community Gardens: • Healesville, Tecoma, Morrisons Transport: • Yarra Valley Ranges Community Access Project, LinC Church Services Network Inc. Those involved with Mental Health: • Eastern Access Community Health, Melba Support Services, Eastern Health Mental Health Program, Community Access Mental Health Alliance Transition towns network • Communities Combating Climate Crisis • Community Harvest Project • Yarra Valley ECOSS • Healesville Environment Watch Inc. • Montrose Township Group • Solstice • Transition Towns MOOKY • Transition Sherbrooke • Warburton Oil Crisis Tribe	Council Members/Departments: • Climate change • Economic and community development • Transport • Home and Community Care • Community development • Parks and facilities • Agribusiness • Cultural liaison • Transport • Service access coordinator • Environment • Age and disability services • Family, youth and children • Arts culture and heritage • Strategic planning • People and performance Other identified players: • Nourish Network • Inspiro Community Health Service • Yarra Valley Community Health Service

Township groups • Healesville and District Township Group • MAP Mooroolbark • Millgrove Residents Action Group Inc • Monbulk and District Community Opportunities Working Group • Seville Township Group • Tecoma Village Action Group • Upwey Township Group • Yarra Glen and District Township Group • Montrose Township Group Other identified subjects: • Indigenous population • Clients of community dinners • Fresh produce retailers • Fruit and vegetable producers	
Bystanders – Low Interest, Low Power	**Actors – Low Interest, High Power**
Identified bystanders: • Residents • Restaurants and cafes • Supermarkets • Bakeries • Environment groups • Take-away restaurants • Farmers Markets	Identified actors: • Victorian Farmers Federation • Chamber of Commerce/Traders Groups

4.3 Stakeholder consultations

In total 6 focus groups and 17 semi-structured interviews were conducted between the 12th and 27th of September. In total 40 individuals were consulted with. Appendix 5 lists the stakeholders consulted with and the method of consultation used. The key themes that emerged from the stakeholder consultations were:

- Strategic policy directions and principles

- A commitment to responsible land use planning

- Support for local agriculture

- Moving towards a sustainable food environment

- Creating a diverse and resilient food supply

- Support during times of food insecurity and natural disasters

- Improving capacity and changing social norms

- Increasing skills and knowledge

An explanation of each theme can be found below.

Strategic policy directions and principles

Through consultations with numerous council members there was a common desire for a food security policy to include a broad, long term and multi-sectorial approach to address issues specific to the Yarra Ranges. Similarly, it was expressed that strong partnerships need to be established internally between different council departments as well as externally through council working together with community organisations that have the capacity to improve food security in the area. Council and Nourish Network members spoke about the role of Yarra Ranges Council in providing leadership, direction and commitment in tackling the issue of food security through a systems approach. Furthermore, they raised the need for future research, monitoring and evaluation of current policies and strategies in order to bench mark against approaches implemented in other municipalities. It was also agreed that local government limitations needed to be considered when addressing food access and food supply given the influence of state and federal government in a number of areas including planning and food regulations.

A commitment to responsible land use planning

Responsible land use planning was identified as a key theme from the community consultations. Council, transition towns and Nourish Network members, as well as a community garden group and an emergency food relief worker all identified land use planning and urban planning as important to be included in the Yarra Ranges food security policy. These stakeholders expanded land use planning and urban planning to include factors such as maintaining agricultural land, providing space for growing food, making use of land in optimal growing areas, as well as improving transport options and the location of food outlets. Transition towns' members and one council member also outlined that factors affecting food access and supply should specifically be considered when developing new and existing areas, including that council should work closely with developers to plan for food security. They also suggested having consideration for housing density, highlighting the need for higher density housing around transport hubs. Nourish Network members and a township group identified limiting residential spread as important for ensuring food security. A community development officer, community garden group and council member outlined effective use of public land as essential to increasing local access and supply, which included the development of edible nature strips/landscapes. Several council members and a community development officer also suggested making council land available for public use related to food.

Support for local agriculture

Support for local agriculture emerged as a key theme from the stakeholder consultations. All stakeholders thought it was important to ensure that agriculture was supported as a key industry in the Yarra Ranges. A number of suggestions which underpin this theme are outlined below. All stakeholders thought it was important for council to advocate for local farming and increased availability of local produce in order to improve food security in the Yarra Ranges. The majority of stakeholders thought it was important to support farmers by reducing barriers to farming in the Yarra Ranges including reduced restrictions for farm gate sales, access to a secure water supply, availability of seasonal workers and reduced permits for crop protection structures. Township groups, community garden members and transition town groups thought it was important that

farming should be sustainable and council employees, the Nourish Network and township groups thought that agricultural land should be preserved to ensure farming in the Yarra Ranges continued into the future. It was suggested by community garden members, emergency food relief, council members and township groups that there should be increased opportunities for local growers to produce food in that area.

Moving towards a sustainable food environment

All stakeholders consulted identified environmental sustainability as an important aspect of food security for the Yarra Ranges. There was a broad range of references in regards to this topic. Three different areas of council and transition towns groups stated that biodiversity was vital for the Yarra Ranges. These individuals along with members of the Nourish Network emphasised that long term planning and investment was needed to maintain the quality of agricultural land in the future. An organic farmer and transition towns' members felt that improved farming techniques which focused on improving soil quality and reducing the amount of chemicals used was important to ensure sustainability. A council strategic planning officer highlighted that a sustainable food environment needed to consider current and future implications of climate change on the food system which would impact the types of produce able to be grown. A number of council employees expanded on the issue of water supply in regards to drought, safe water sources, and grey water usage in order to support agriculture practices. The chamber of commerce recognised the carbon footprint that food production and transport was having upon the environment. Similarly, transition towns groups, an organic farmer and an Indigenous council officer believe that reducing food miles was an important factor in addressing food security, highlighting the unnecessary travel of produce from the Yarra Ranges to a central distribution point and back to the Yarra Ranges where purchases are made. They also felt it was important to keep the region free from all genetically modified crops. Lastly, a council member thought that peak oil was influencing and impacting upon the ability to maintain a sustainable food environment, both at a local and national level.

Creating a diverse and resilient food supply

The desire to establish a diverse and resilient food supply within the Yarra Ranges was a key theme identified during community consultations with council members, farmers, emergency food relief workers and community garden workers. Council members and emergency food relief workers discussed the types of food outlets in certain areas of the Yarra Ranges and the need to increase the variety of outlets, particularly outside major towns, thus providing a diverse range of nutritious foods at affordable prices. Similarly, emergency food relief workers expressed the need for increased competition amongst outlets in order to achieve competitive prices. Council spoke about the need to advocate for healthy, local produce to be sold in shops in order to support farmers, as well as providing intelligence to new businesses being established in the area to encourage responsible and sustainable practices. They also mentioned encouraging responsible business through sourcing produce from different areas to provide resilience against emergency disasters. Farmers and emergency food relief workers suggested an increase in healthy food outlet promotion through marketing and effective dissemination of information on how to access and where to purchase fresh, nutritious and affordable local produce. Additionally, all stakeholders mentioned the importance of improving the quality, variety and availability of foods for people to purchase.

Support during times of food insecurity and natural disasters

Although this document will support the development of a food security policy, five members from council, the Nourish Network and emergency food relief workers identified that it was important that the document considered those individuals who are currently food insecure. This included addressing the underlying causes of food security as well as providing short term food relief to these individuals. The Nourish Network, transition towns groups and eight council members also felt that ensuring the community remains food secure during emergencies or natural disasters such as bushfires or pandemics was important and should be included in a food security policy.

Improving capacity and changing social norms

The need to build capacity within the community, to promote community connectedness and provide an opportunity for the community to take ownership of their own health and wellbeing was a topic that was raised in multiple stakeholder consultations, particularly those with council members, The Nourish Network, members of community gardens and a community development officer. Council members, the Nourish Network and a community development officer also thought it was important to change the current social norm regarding accessing food and food preferences. The need for there to be a shift in culture regarding food preferences and trends in growing food at home was also raised by council members and the Nourish Network. A selection of council members also discussed the importance of changing and improving the current attitude towards food preferences and healthy eating that exists within the community. Finally, council members supported the view of Nourish Network members, community garden members and a community development officer that there needs to be more support provided to local initiatives that currently address food security at the grass roots level in order to help support communities to become self-sustainable.

Increasing skills and knowledge

All stakeholders with the exception of farmers believed that food security was an issue in the Yarra Ranges and that increasing knowledge and skills was important in addressing this. A number of stakeholders excluding the chamber of commerce believed that individuals had knowledge about healthy eating and health literacy but were unable to apply this information. It was identified that individuals lacked the ability to grow their own foods, to choose and purchase fresh fruit and vegetables and to cook, particularly when using unfamiliar ingredients. There was a general consensus from council and transition towns groups that individuals were unable to recognise which produce was in season which had financial implications. The Nourish Network discussed the perception that it was quicker and cheaper to purchase take-away options as opposed to preparing a healthy meal. Similarly, the chamber of commerce felt that people were unaware of cheaper meal and food options.

4.4 Process for Developing a Food Security Policy

A 16 step food security policy development process was identified. Refer to Figure 10.

Figure 10. Final summary of policy development process

Identify a need → Formation of steering and advisory groups / Decide on the direction and of the policy → Problem analysis and data collection / Data including number of people affected and risk populations

Literature search / Including determinants, key themes of current policies and frameworks ← Development of project plan, timeline, goals, objectives and impact evaluation planning ← Establish project management team

Stakeholder analysis → Development of questions for stakeholders and decide upon consultation methods → Stakeholder consultation

Development of draft policy ← Development of background paper ← Thematic analysis / Compare consultation results with literature search results to determine final themes

Release draft policy for community consultation / Minimum 1 month → Final policy development → Presentation of final policy to council for endorsement

Development of action and evaluation plans / Revised yearly

5.0 Discussion

This project contributed to all steps of the intelligence phase of the bi-cycle model for public health nutrition practice, ensuring a firm understanding and evidence base was developed before the action phase was entered [43]. Of the steps undertaken, step 6 ('Mandates for public health nutrition action') was unique. Not only did this project consider existing policy mandates that supported the development of a food security policy directions paper, but the final product will become a policy mandate to support future action in public health nutrition approaches to addressing food security in the municipality. Refer to appendix 2 for further information on the bi-cycle model.

The first two steps of the action phase were initiated, but not completed comprehensively due to the limited timeframe of the project. Specifically, 'Writing statements for action' (step 9) was commenced through writing vision, goals and objectives, however these require further refining to specifically reflect changes desired in the community. 'Logic modelling' (step 10) was commenced by writing this report which documents all work and planning done so far; making links between the problem of food security and potential directions for Yarra Ranges Council to take to address it. Completing the next steps of the action and evaluation phases of the model, including addressing steps 9 and 10 comprehensively, is the responsibility of the project supervisors, in conjunction with Yarra Ranges Council.

5.1 Literature Review

Food security frameworks

The selected models were chosen as they clearly demonstrated the multifactorial nature of food security [5,39,51,57]. The frameworks explored the environmental, physical, economic and social factors which contribute to food security. They encompassed key themes from other food security policy options papers including education, social support, urban planning and food outlet type and variety. Each framework provided a different visual concept which highlighted the varying nature in which the determinants of food security can be presented. All factors included in the four frameworks complied with the project's definition of food security.

Option one was unique as it clearly demonstrated that food security exists on a number of levels including individual, household, community, national and international. However a drawback of this option was that a local government food security policy is unlikely to have an impact on national and international factors which affect food security. Options two and three emphasised the importance of a sustainable local food supply and highlighted factors which affect access and supply. A key strength of option three was the incorporation of factors which encourage an environmentally sound, socially just food system which considers the agricultural and aquatic ecosystem. Option two and three failed to demonstrate the interconnectedness that occurs between different factors of food security; a limitation of these models. Option four provided a more flexible approach to food security whilst still considering key factors. This model addressed domestic food markets, food production systems and access to agricultural support services which made it unique. It also focused on imports and international trade, factors which local government has minimal influence over. For further information about each framework refer to appendix 3.

Option one was selected as the preferred food security framework. It had a strong design which included a series of integrated circles which represented the multifactorial nature of food security. The framework encompassed a range of different factors which affect food security from an individual to global level. This framework allowed for an upstream and settings based approach to food security that was reflective of the direction that the Yarra Ranges Council wished to take. It also incorporated details which were relevant to the Yarra Ranges including climate change, land and water resources and loss of agricultural land. These factors represented the unique characteristics of the Yarra Ranges which is a food producing region. Whilst a local government food security policy could not address the national and international factors included in this framework these still influence what the council can do on a community level and should be acknowledged.

Locating a suitable framework was difficult for a number of reasons. Firstly, whilst the concept of food security has been around since the mid-1970s [58], there was vast confusion between food insecurity and security, meaning many food security frameworks were in fact food insecurity frameworks. Additionally, the absence of a specific definition for a framework resulted in countless models identifying themselves as being frameworks but were in fact determinant or food system models. As the Yarra Ranges Council is an interface council and has many unique characteristics locating a framework that adequately described this uniqueness was challenging.

Determinants of food security

Research was carried out to understand the individual, household and community factors which influence food security in the Yarra Ranges to inform the development of a food security policy. An adapted version of the map outlining the food security determinants for the NSW food security options paper was used to represent the food security determinants identified in the literature search and those specific to the Yarra Ranges. However, this map was not chosen as a food security framework as it did not depict the higher power influences from a global and national level. These are important to consider as they subsequently influence food security determinants on a community, household and individual level.

From the literature search it was found that the determinants of food security are commonly categorised into two groups: food supply and food access [5]. The availability of nutritious food (food supply) and the ability to access nutritious food (food access) influence the level of food security within a community [59].

Food Access is the term used to describe an individual's ability to access their local food supply [5]. This includes financial constraints and expenses that may restrict a person's ability to purchase nutritious foods, distance and transport to shops, knowledge, skills and preference, storage facilities, convenience, preparation and cooking facilities, time and mobility, as well as social support [5].

Table 8. Factors which affect food access

Factors which affect food access	Discussion
Financial constraints and expenses	Having sufficient funds to purchase nutritious foods is a key determinant of food security [5,60,61]. Often when disposable income is limited, food is first to be sacrificed [5]. In today's society bills, mortgages, rent and medical expenses are becoming more expensive and often take a higher priority over food [1,13,59,62]. The Outer East Community Food Access Research Project identified financial constraints as a commonly reported barrier to achieving food security in the Yarra Ranges [13]. Food prices, rent, petrol, transport, bills and medical expenses contributed to a high cost of living [13].
Distance and transport to shops	Physical access to food is determined by distance and transport to shops (particularly supermarkets where there is a greater variety of nutritious foods at competitive prices) [5,13]. Studies have found that areas of higher socio-economic status usually have a shorter distance to travel to large supermarkets and fresh food outlets compared to areas of lower socio-economic status [1,63]. In the Yarra Ranges, a key factor that influences access to food is transport [13]. There are many areas within the Yarra Ranges where there is limited access to public transport thus individuals struggle to access fresh food outlets. Similarly, there are residential areas that are situated great distances from large supermarkets therefore these individuals must rely on the limited range of nutritious foods available at small, local convenience stores [13].
Knowledge, skills and preference	In order to improve food security it may be important for individuals to have the ability to make healthy food choices and the skills to prepare nutritious meals [5]. In addition, personal food preferences influence the food choices that individuals make thus it is vital to understand people's perceptions of food and their social norms [5]. In saying this, having a good knowledge about food does not necessarily mean that an individual will make the right food choices. In order to engage in positive diet-related behaviours, motivation and a desire to overcome barriers to change is required [64,65].
Storage facilities	Food is often cheaper when purchased in bulk thus it is important to have adequate storage equipment such as fridges, freezers and storage rooms [5]. Individuals living in cheap housing, hostels and shelters often have limited access to storage facilities which can contribute to food insecurity [5]. In 2008 community workers in the Yarra Ranges reported that a lack of fridges for adequate safe storage of food in rental or shared accommodation contributed to food insecurity [13].
Convenience, preparation and cooking facilities	Convenience, preparation time and availability of cooking facilities and equipment are all determinants that influence food security [5]. Not having appropriate cooking facilities and equipment can be a barrier to producing nutritious meals at home [5]. Similarly, due to people's lifestyles becoming increasingly busy with less time being set aside for preparing meals, convenience is an important factor affecting what people choose to eat [5]. In the Yarra Ranges, individuals that lived alone and cooked for themselves reported convenience as a significant factor when selecting foods [13]. From the Outer East Community Food Access Research Project it was found that some community members considered it a waste of resources to cook a complete meal [13].

Time and mobility	Limited time to purchase and prepare nutritious meals can be a barrier to accessing a healthy diet, particularly for busy family where the parents work full time [5]. Similarly, poor physical mobility can restrict a person's ability to access supermarkets and prepare meals at home. This may be experienced by people with disabilities and the elderly thus contributing to an over-reliance on convenient, readily available processed foods, which often do not provide adequate nutrition [5].
Social support	Food along with its preparation and consumption are thought of as a social activity [5]. Individuals who live alone or who are socially isolated are at risk of food insecurity [5]. Social isolation and lack of support can contribute to poor appetite and diminish a person's desire to cook and prepare meals [5,66,67,68].

Food Supply is the term used to describe the supply of food to individuals within a community. This includes the location of food outlets within the area; the availability of food within those outlets; the price, quality and variety of food available to the community and the promotion of different foods [5,59].

Table 9. Factors which affect food supply

Factors which affect food supply	Discussion
Location of food outlets	Food outlets can include supermarkets, fast food outlets and markets [5]. The location of food outlets influences the food supply available to individuals [5]. It is important that food outlets, which provide a variety of safe, nutritious and affordable foods, are located in appropriate areas so they are close to housing or easily accessible by public transport [5,59]. Studies have found that areas of higher socio-economic status often have greater access to food outlets which provide a diverse range of nutritious affordable foods when compared to areas of a lower socio-economic status [1,69]. In addition, the Outer East Community Food Access Research Project identified certain areas within the Yarra Ranges such as Healesville, Yarra Junction, Wesburn, Millgrove and Warburton to be at risk of food insecurity due to a low SEIFA (below the 50th percentile) and a low ratio of supermarkets/fresh food outlets to fast food/takeaway outlets [13]. Furthermore, 23 suburbs in the Yarra Ranges were not serviced with public transport which correlated with the absence of food outlets [13].
Availability in food outlets	The availability of appropriate, safe and nutritious foods within local food outlets can reflect an individual's local food supply [5]. Food choices are influenced by the availability of food within outlets [5]. If people are only able to access small convenience shops with a limited availability of food compared to large supermarkets, this can affect household food security [59]. Studies have found this to be the case with many socio-economically disadvantaged groups living in areas with limited access to supermarkets that rely on a limited range of nutritious foods within smaller local convenience stores [13,69,70,71,72].

Cost of food	The cost of food can be a key factor in determining people's food choices, particularly those with a low income [5,73]. Studies have shown that when fresh fruit and vegetables are available at affordable prices, food security is improved [5]. Individuals with a lower socio-economic status are likely to consume less fruit and vegetables. Possible reasons for this include the cost of food, less access to nutritious food and competing interests [13,16,19,71,74].
Quality	The quality of the local food supply needs to meet certain standards in order to provide appropriate nutritional value, flavour and acceptability [5]. Similarly, good quality fresh foods need to be reasonably prices in order to improve food security [5].
Variety	A nutritious diet can be achieved through a good local food supply that provides individuals with a variety of different foods from all major food groups including fruit and vegetables, meat, eggs and dairy products, as well as breads, cereals, rice and pasta [5].
Promotion	The way the local food supply is promoted can greatly influence people's food choices, including their ability to identify and locate nutritious foods. For example, in certain areas within the Yarra Ranges such as Healesville, Yarra Junction, Wesburn, Millgrove and Warburton there is a large number of takeaway/fast food outlets which often promote the consumption of processed foods that are high in saturated fat, sugar and salt [13]. Foods can be promoted through in-store promotions, in-store product placement and advertising on buses, television, radio and billboards [5].

Research conducted in the Yarra Ranges to determine causes of food insecurity has identified issues with food access including impaired physical access to food outlets, limited availability of affordable and nutritious foods and financial difficulties [13,19]. Not all literature included in the review was specific to the Yarra Ranges and could not be directly related, however research carried out by the Outer East Health and Community Support Alliance was used to highlight the above determinants of food security in the region. Knowledge of factors affecting the food supply was limited and required further research in order to obtain a balanced view of influences on food security in the Yarra Ranges. The above identified determinants of food security guided the development of questions for community consultations. A particular emphasis was placed on eliciting information about the food supply due to the lack of knowledge in this area, and farmers and local produce retailers were therefore interviewed. This assisted in providing a deeper insight into the issues affecting food security in the Yarra Ranges; contributing to the evidence base and allowing informed decisions to be made.

Key themes in existing food security policies

Policies were analysed to determine the most common themes present in food security policies. All policies located through the literature search were included in the sample. A range of international, state and local policies were included. Not all policies included in this literature search were specifically food security policies. Food policies which considered food security were also included to increase the evidence base available and provide the largest sample possible for analysis. It is likely that not all available food security policies were located in the literature search, as many are internal documents and therefore not available to the public.

Results from this analysis were used to inform the questions asked during consultations with stakeholders. By identifying common themes in policies a greater understanding of the topics which should be a focus of the stakeholder consultations was gained. Not all identified themes were likely to be relevant to the Yarra Ranges, however results gained from community consultations were used to assist with determining the most relevant themes and to identify additional themes relevant to the region.

A number of themes identified during the analysis could be applicable to the Yarra Ranges. One factor consistently identified as a barrier to food security in the Yarra Ranges was transport [13,16]. As the largest metropolitan municipality in Melbourne and an interface council, the Yarra Ranges has particular challenges in ensuring that its residents are able to access food [13]. Therefore a theme such as urban planning may need to be included in the Yarra Ranges food security policy in order to address this issue. The Yarra Ranges also has a large farming and agriculture presence [13]. Therefore the council may wish to make supporting the local farming and agricultural industry a focus of the policy. Lastly, the Yarra Ranges is an area at risk of natural disasters such as bushfires and droughts [75]. Therefore when addressing food security in the Yarra Ranges, it would be important for the council to address the communities' ability to remain food secure during times of hardship. Including a theme such as building community resilience in a food security policy would ensure that strategies are put in place to ensure the community remains food secure during these times.

Policy Development Process

As outlined in the results, there is limited literature available regarding a policy development process for a food security policy. In addition, the available literature is brief in nature. Consequently, there was not a well-established model that could be recommended by this paper to guide the development of a food security policy for the Yarra Ranges, nor to guide the preceding steps undertaken in the development of this food security policy directions paper. Instead, the information available was pooled and appraised to identify the most appropriate process, which forms the basis of several recommendations provided (see section 6.0 recommendations). It is important to note that it took several weeks to obtain responses from other Council's regarding the processes used to develop their food security policies. Hence, the process of compiling this directions paper was already partly completed once this information was obtained, limiting the evidence base for earlier steps of the project.

As outlined in table 6, all Victorian councils with food security policies used community consultation as a key element of the development process. The method of consultation undertaken varied between councils, however two main methods identified were written surveys and discussion forums. These were not considered appropriate to be undertaken to inform a food security policy for the Yarra Ranges due to the limited timeframe and resources available for developing the directions paper [49]. Instead, focus groups and semi-structured interviews were used to consult with stakeholders (refer to section 5.3 stakeholder consultations).

All councils analysed consultation results thematically and as a result this technique was utilised to identify the key themes suggested by this paper (outlined in section 2.3 and 5.3). After analysing results from community consultation and establishing suggested key themes, other councils undertook activities including developing a draft policy, requesting public comment, endorsing the

policy and developing a subsequent action and/or evaluation plan. Consequently, these have formed the basis of several recommendations. Raising awareness amongst council members, having clear timelines and governance and taking a strategic approach across all council departments were also identified as important aspects of developing a policy.

5.2 Stakeholder Analysis

As seen in table 7 the majority of stakeholders who were considered players, and therefore had high interest in the project and high power to influence change, were individuals working within council departments. Council members were thought to be able to provide the richest information on necessary inclusions for a food security policy for the region, particularly at a strategic level. In addition, Nourish Network members and members of Ranges and Yarra Valley Community Health Services were also considered players as they had a direct involvement with the development of this project and had worked collaboratively with council.

Stakeholders who were identified to be involved with individuals who experience food insecurity such as emergency food relief agencies, community kitchens and community garden organisations were categorised as subjects. These groups were deemed to have high interest in the project having worked with individuals who are food insecure, but their power to influence change at a larger community level is limited. Fresh produce retailers and fruit and vegetable producers were deemed to be subjects as they are involved with the supply and production of fresh produce in the region. However they have limited capacity to influence change. Finally, transition towns and township groups were classified as subjects as their interest in community wellbeing and thus potentially also food security was deemed high, however as with many other subjects their capacity to influence change was considered limited.

Community members and food suppliers such as supermarkets and fast food outlets were classified as bystanders in the stakeholder analysis as they were thought to have little interest in the project as well as limited ability to influence change in food security for the Yarra Ranges. Finally stakeholders that were considered to have a significant amount of power but little interest in the project included the Victorian Farmers Federation and the chamber of commerce. The stakeholder analysis was used to determine which stakeholders would provide the richest information and to prioritise consultations given the time constraints of the project.

Despite using a range of methods during the stakeholder analysis including snowball sampling important stakeholders may have been missed during the analysis. This would limit the range and completeness of information gained through stakeholder consultations and consequently the policy document produced may not reflect the ideas and values of all necessary stakeholders in the Yarra Ranges community.

5.3 Stakeholder Consultations

Methodology

Action research methodology was considered most appropriate for this project. The goals of action research methodology are to work with participants 'to understand something about the social world and change it [76].' This clearly reflected the intent of this project which was to identify and understand issues and perceptions regarding food security, as well as possible improvements that could be made, in order to inform the development of a food security policy directions paper for the Yarra Ranges Council. Participatory Action Research (PAR) was used for Nourish Network members as PAR allowed participants to have a solid understanding of the research and empowered them with the ability to become partners in the research project and act on the research [44]. The action research process also raised awareness of food security amongst council and selected community members and increased their knowledge and awareness of the issue.

Type of community engagement

The level of community engagement   chosen, based on the IAP2 Public Participation Spectrum (IAP2), was to consult the community [77]. This level of engagement was appropriate for the project as the goal of consulting is to obtain community feedback on analysis, alternatives and/or decisions [78]. This was reflective of the projects objectives and appropriate given the project's resources.

Consultation Method

Focus groups were chosen as the preferred qualitative consultation method as they enabled a diverse range of opinions and attitudes to be collected at one time. This was ideal as little was known about the community's opinion of food security and appropriate given the limited research resources [49,79,80]. Interviews were used when an individual was unable to attend a focus group or was deemed inappropriate for a number of reasons [49]. Additionally individuals considered to have specific knowledge were invited to interviews as this enable probing questions to be asked to elicit valuable information [49]. A semi-structured interview style was chosen as it enabled pre-determined questions to be asked whilst providing the interviewer with more flexibility and a greater ability to probe into specific responses [81].

Both focus groups and interviewing elicited rich information from participants, whilst allowing them to freely articulate their view on a focused research topic [43,79,82]. A drawback of the focus groups was managing the group dynamics that at times limited the success of the interview, such as one person dominating discussion or everyone trying to talk to once. Additionally, it was evident at times through both methods that biased views existed, reflective of different backgrounds, personal views or opinions on certain topics [49,81]. Lastly, both methods require a skilled facilitator or interviewer to elicit the most beneficial information [49,80].

Stakeholders Consulted

Not all identified stakeholders were able to be consulted with due to limited resources and the constraints of a two week consultation period. A list of consulted stakeholders is provided in appendix 5. Therefore, a purpose sampling strategy was utilised, with a deliberate focus on selected individuals who were identified as rich sources of data and had a good understanding of the community and their needs [83]. The project focused on gaining an understanding of potential strategic approaches that could be implemented by Yarra Ranges Council to improve food security at a community level. The majority of the consultations were therefore conducted with individuals from different areas of council. Organisers of local community groups including community gardens and markets and the Nourish Network were utilised to gain an understanding of issues experienced by vulnerable and target groups within the community. Vulnerable members of the community were not consulted with as information had previously been collected by the Outer East Health and Community Support Alliance in 2008 [13]. Farmers and fresh produce retailers were consulted with as it had been identified that a gap in the literature existed around the influence that the food supply has on food security in the Yarra Ranges [13].

As a result of the narrow consultation time period, individuals being unavailable for consultations and the vast demographic nature of the region, there was an uneven distribution of stakeholder consultations throughout the Yarra Ranges. Due to the emphasis placed on consulting with council members a number of consultations were performed in Lilydale as this was the location of the Yarra Ranges Council's offices.

Thematic Analysis

Whilst there are a number of qualitative analysis methods, thematic analysis was deemed the most appropriate method to use. Content analysis' process of identifying codes prior to searching the data was not appropriate for inexperienced researchers due to the potential for biased results [84,85]. It is often used as the initial step that leads on to another method of qualitative data analysis; a process not ideal given the limited time period allocated for this project [84]. Discourse analysis was disregarded as it was deemed too labour intensive and time consuming [84]. Whilst grounded theory and thematic analysis are considered to be influential research methodologies and very similar in nature, thematic analysis was ultimately chosen as it did not require theoretical sampling to occur, thereby removing a step in the analysis process whilst still enabling valuable information embedded in the research to be identified, analysed and described [83,84,85].

When coding as part of an analytical team, despite an agreed approach, individual speculation concerning what information was of interest may have resulted in ambiguity across the researchers [83]. Due to the subjective nature of the data collected, individuals could have interpreted information differently. Furthermore, as the number of consultations continued the type of coding by and between individuals might have changed from concept driven coding to open-ended coding [83]. Additional limitations arose when there were double-ups of categories from different consultations. Due to the number of consultations and interviewees, the different meanings of the same code might have been misinterpreted or over-looked, missing crucial information. This was apparent when different meanings of categories were discussed when being incorporated into themes.

In order to determine the themes to be included in the final food security policy directions paper, the results from the stakeholder consultations were compared with the results from the literature search. The themes that emerged from the thematic analysis of the stakeholder consultations were compared with the themes that exist in other food security policies in Victoria to ensure that any vital and relevant themes in the literature were not overlooked. In addition to this, the themes from the thematic analysis were compared with the framework and determinants that were gained from the literature to ensure the themes from the consultation incorporated all relevant aspects of food security. The final themes were:

- Strategic policy direction and principles
- A commitment to responsible land use planning
- Support for local agriculture
- Moving towards a sustainable food environment
- Creating a diverse and resilient food supply
- Support during times of food insecurity and natural disasters
- Improving capacity and changing social norms
- Increasing skills and knowledge

A detailed outline of each theme is provided below. There is likely to be some overlap between these themes, however this seeks to demonstrate the complex nature of food security and further highlights the multi-factorial responses required to address this issue.

Strategic policy directions and principles

The vision and principles outlined in a policy help to provide guidance and directions for action. This will outline what Yarra Ranges Council aims to achieve in the future as well committing to facilitating change [28].The Yarra Ranges Council has strong principles around providing a strategic approach to addressing issues that enhance the health and wellbeing of residents across the municipality [16].

The Yarra Ranges Community Wellbeing Plan 2010-2013 and Vision 2020 outline the council's strategic direction [16,28]. It includes its commitment to improving the health and wellbeing of individuals and local communities and guides the development and implementation of future council policies and programs [16,28]. A possible vision for the council's food security policy could be to improve food security amongst residents living in the Yarra Ranges by ensuring access to safe and nutritious food at all times, without having to resort to emergency sources. This vision is aligned with the Community Wellbeing Plan 2010-2013 priority area 'supporting residents to achieve and maintain a healthy lifestyle [16].' This policy aims to provide a strategic framework which will underpin future action on food security in the region.

The Yarra Ranges Council recognises that issues around health and wellbeing are multifaceted and require a collaborative effort internally between different council departments and externally with service providers and the broader community [16]. The vision of this food security policy is to develop strong partnerships with other government, private and community sector organisations to enable a uniform and coordinated approach to future projects aimed at improving food security in the Yarra Ranges.

This policy should be implemented through an action plan which outlines timelines for achievement, resources required and responsibilities for delivery. In the public health sector, it is important to monitor and evaluate the work that is being undertaken by council and other service providers in order to know whether intended results are being achieved and whether these interventions are making positive contributions towards improving people's health [85]. Any strategies implemented by Yarra Ranges Council would therefore need to be reviewed and evaluated to determine whether they are meeting the policy's aims and vision. Additionally, it would be valuable for Yarra Ranges Council to evaluate existing food policies within Victoria and bench mark against strategies implemented by other municipalities. 'Benchmarking is an ongoing, systematic process that seeks to identify and understand the best practices of others and customise such practices to one's own setting [87].' This would involve Yarra Ranges Council looking outside of their organisation for new ideas that can be imported and modified, which in turn would lead to better outcomes and enhanced performance [85]. Progress and outcomes of the policy should be reported back to the Yarra Ranges Council and community at regular intervals.

It is also important to consider the limitations of the Yarra Ranges Council in being able to address all suggestions and feedback provide throughout the community consultations. In the absence of any Federal or State policies, local government is limited in its capacity to address all the determinants surrounding food security. However, given that food security has been identified as an issue for certain population groups in the Yarra Ranges [13,19,59], council recognises a local response to the issue is required, thus a food security policy is essential. The food security policy for the Yarra Ranges will only include themes that council has the capacity to change. As there are many outside influences from higher powers of government that affect food access and food supply in the Yarra Ranges, considerations need to be made in regards to what is within the council's scope.

A commitment to responsible land use planning

Responsible land use planning is important to be included as a key theme in the Yarra Ranges food security policy. According to the Victorian Local Governance Association, land use planning is a strategic process that manages the use and development of land [87]; hence it has a significant impact on all aspects of the food system, including growth, distribution and access of food [87]. Land use planning has an influence over factors such as use of public land, land zoning (including retention of land for agricultural use), housing density and location, as well as access to goods and services, encompassing features such as the number and location of outlets and transport to such outlets [87]. In the context of this food security policy directions paper, responsible land use planning involves consistently considering food access and supply in the planning and design of new and existing communities, in order to assist in creating an environment that supports equitable opportunities for food security for all residents [38,88].

Evidence suggests that current land use planning and design issues contribute to unequal access to food for some residents in the municipality [13,87]. However, responsible land use planning can provide opportunities that improve access and supply of food, positively affecting several determinants of food security [87]. On a household level, land use planning can improve distance and transport to food outlets, such as by providing walking and cycling infrastructure, and increasing the number of food outlets available [5,89]. On a community level, land use planning decisions can influence the location of food outlets and improve the transport options available. This is imperative

as lack of public transport and limited choice of food outlets have been identified as two major determinants of food insecurity in the Yarra Ranges [13]. Addressing these determinants has the potential to reduce the current food insecurity vulnerability created by geographical distance and also minimises car dependency. Responsible land use planning decisions made through zoning requirements can reduce the loss of food producing land [89,90]. Loss of productive land to competing uses (such as housing) threatens the food system by increasing reliance on less productive land and increasing transport distances for food [88]. As the Yarra Ranges is a key food producing area in Victoria, maintenance of productive land is particularly important to ensure a sustainable food supply, not only for the municipality, but for the state [36].

Housing density and reducing the spread of residential development is an important consideration in responsible land use planning, due to issues associated with providing services to wide spread communities [36] . New developments should be supported by clear access to activity centres to facilitate food access [30,89]. Land use planning decisions should make public land available for food related use to improve resident's local food access and supply [89,90]. This extends to ensure that all residents have access to space to grow food; either in shared spaces or on personal land. Essentially, undertaking responsible land use planning provides an environment where all residents can easily access healthy and nutritious food choices [88,90]. Such an environment also provides the opportunity to create jobs and build a vibrant, resilient community and economy [89].

Several other Victorian municipalities include land use planning in their food security policies under the theme of urban planning [3,38,39,40]. However, for the Yarra Ranges policy, the title of urban planning was not seen to holistically represent the region's interface situation. Instead, the theme of responsible land use planning was chosen as a way of encompassing urban, regional and rural planning, in order to ensure the unique characteristics of the municipality were considered. It is important to note that the Yarra Ranges Council is subjected to limitations with regards to undertaking responsible land use planning. In particular, while council can assist to influence the number of food outlets in an area, council cannot influence the food outlet type, and consequently cannot prohibit certain 'unhealthy' food outlets from being established [88]. Furthermore, state planning policy has a sphere of influence over land use [87,88]. This reiterates the principle that council must work in partnerships with others, including developers and other levels of government, in order to create a municipality where all people can meet their food needs, both now and in the future [90].

Support for local agriculture

Support for local agriculture was identified as a key theme to be included in the Yarra Ranges Council's food security policy. Agriculture is 'the practice of cultivating the soil and rearing animals [91].' Considering agriculture in a food security policy is important given that the Yarra Ranges is 'the second highest food producing region in Victoria in terms of value of agricultural output and a major food processing region [36].' In the context of this food security policy direction paper, supporting agriculture refers to advocacy for local farming, supporting and encouraging local food production, reducing barriers to farming, preserving agricultural land and ensuring the sustainability of farming in the region. Support for agriculture therefore needs to be considered by the Yarra Ranges Council when considering future action on food security.

Advocacy for local farming and support for increased local food production are important focuses for the Yarra Ranges. A number of council documents support the need for encouraging agriculture and ecological sustainability which places an emphasis on considering the vital role that agriculture plays in the Yarra Ranges and supports increased localisation and encouragement of food production in this municipality [28,29]. Evidence suggests that a greater emphasis needs to be placed on supporting local food production as a strategy which contributes to food security and should be an important consideration when council undertakes relevant planning in this area [87,88]. Raising awareness of the benefits of local food production to community members is integral to ensuring that the community are aware that land used for food production is benefiting the community as a whole by creating jobs, contributing to the local economy and ensuring long term food security [88,92]. Maintaining employment opportunities with the Yarra Ranges also contributes to the social determinants of health by ensuring that members of the community are provided with job opportunities and good working conditions which enable them to have sufficient resources to cope in their environment [93].

Developing resilient food production systems has been identified as a key factor in ensuring long term food security [88]. Ensuring farming in the Yarra Ranges is sustainable incorporates a number of factors including access to seasonal labour, retaining productive land, securing water supplies, decreased restrictions for the installation of crop protection structures and sale of produce from farm gates as well as ensuring that the knowledge of experienced farmers is maintained [30,36,90,95]. Farming needs to remain viable in the Yarra Ranges to ensure diversity and resilience in the food production system and foster long term food security [88,92].

Preservation of agricultural land is important for food security as it ensures that nutritious, locally produced foods are available now and in the future [92,93]. Council's economic development strategy and environment strategy highlights the value of preserving high quality land that is used for agriculture [30,35] . Farming in the Yarra Ranges also creates local jobs and the loss of this industry would have negative effects on the economy as well as those individuals employed in the agricultural industry [36,87,92]. Enabling farmers to sell produce directly to the public benefits farmers and community members as it increases profits for farmers and enables community members to have access to affordable, high quality fresh produce [93]. Whilst sales from farm gates are regulated by State government planning policies the Yarra Ranges Council has a role in advocating for reduced restrictions in the Yarra Ranges as increased farm gate sales will benefit the local economy and create more jobs [36,93].

Moving towards a sustainable food environment

A sustainable food environment is a central theme for a food security policy. Sustainable food is food that is locally and ethically produced, which is healthy and affordable for all people and doesn't adversely impact on the ecological systems which the population depends on [39]. Sustainable food systems encompass production, processing, distribution and marketing of food in all contexts, urban and rural [87,94,95,96].

It has become increasingly apparent that modern food systems have significant environmental impacts and are unsustainable [39,53,87,97]. Global forces impact on and complicate food security issues at multiple levels within Australia [87]. These elements include climate change, greenhouse gas

emissions, biodiversity, finite natural resources including water, energy and oil and land degradation through fertilisers and land clearing [36,39,87,97]. Whilst these issues are not able to be controlled at a local level, their impacts still affect food security in the Yarra Ranges. This is reflected by the inclusion of climate change, biodiversity, oil supplies and climate change in the chosen food security framework.

The Yarra Ranges Council's Adapting to Changing Climate and Energy Plan acknowledges that 'peak oil and continued impacts of climate change pose threats to reliable and affordable access to food [37].' Therefore, it is essential that council actively facilitate the creation of a sustainable food environment to reduce the impacts that global issues have upon food access and supply in the Yarra Ranges. Peak oil, the time when demand for oil outstrips supply, is expected to occur within the next decade [98]. The effects of an increase in the cost of oil will filter down to a local level, where it will impact all sections of the community. It is proposed there will be an increase to the cost of petrol for individuals to travel to food outlets, higher costs for refrigerating or heating food and declining profits for farmers and food retailers [98]. The substantial 'food miles,' or distance that food travels from initial production to the consumer, that is currently associated with centralised food distribution, will greatly impact the cost of fresh produce in the region. Council could act to reduce food miles by encouraging local production and consumption, investing in self provisioning of food such as community gardens, gardening courses or investing in markets or community support agriculture schemes; strategies which are suggested in their community climate change and peak oil action options plan [37]. These initiatives would support the creation of a sustainable food environment in the Yarra Ranges and therefore improve food security in the region.

The Yarra Ranges Council's State of the Environment Report identified that less rainfall and run-off, resulting in reduced water supplies and stream flow is likely to occur as a consequence of climate change [36]. With water security central to agriculture and thus food security, it is important for council to be planning and investing in a sustainable food environment. The council is already working on a project with Yarra Valley Water to promote the use of recycled water [36], however council has the capacity to do more by raising awareness and implementing initiatives to protect current water stores and encourage water saving practices, such as discouraging excessive use of nitrogen and phosphorous fertilisers by farmers that affect the water quality from waterways runoff [97,99]. This is reflective of the Yarra Ranges Council's Green Wedge Management Plan, by encouraging and supporting sustainable farming and biodiversity[36].

Whilst council is limited in their capacity to address these global and national issues, three other municipalities' food policies have specifically focused on reducing the negative environmental impact of food systems by improving environmental sustainability [3,39,41]. Therefore, through a food security policy, council can reduce the impact that climate change and peak oil can have upon the food system through long-term planning and preparation. This can be done by reducing food mileage, supporting traditional farming methods and preparing for reduced water periods. These actions are supported by the Department of Sustainability and Environment's Land and Biodiversity White Paper which focuses on building resilience in ecosystems, a vision shared by the Yarra Ranges Council [36]. Effective conservation and sound management practices are also necessary to protect the agricultural land in the Yarra Valley from damage or resource depletion to ensure it can be used for food production now and in the future [36].

Creating a diverse and resilient food supply

Establishing a diverse and resilient food supply was a key theme amongst the Yarra Ranges community and relates to all individuals having access to a wide variety of safe, nutritious and affordable fresh produce [5]. It also considers the location of food outlets within the area; the availability of food within those outlets; responsible food sourcing, and the promotion of nutritious foods [5,28,59]. The food supply was identified as a significant determinant of food security in the literature search and is included in the national and community levels of the food security framework used to underpin the development of a policy for the Yarra Ranges.

The location of food outlets within certain regions of the Yarra Ranges, and subsequently the food available to those individuals living there, also falls under the theme 'responsible land use planning.' Council has the capacity to improve the food supply available to individuals by making responsible decisions concerning land use and the development of infrastructure, which provides opportunities to increase the number of food outlets available [89]. Increased numbers of supermarkets and green grocers within towns will contribute to increased competitiveness and result in more affordable prices for nutritious, fresh produce. Having good access to healthy food outlets within a catchment area which are selling food at lower prices is important for facilitating better health outcomes in communities [92]. The term food security relates to an individual's ability to access safe and nutritious foods without seeking emergency food relief [1,3,38,39]. This policy must therefore outline the council's role in promoting and advocating for the sale of fresh, high quality, safe, nutritious and affordable produce in the region.

Localising food production and sourcing is a priority for the Yarra Ranges, outlined in the Vision 2020 report and is a fitting topic to be included in a food security policy for the region [28]. Local food production and sourcing plays a vital role in providing food for communities in towns, cities, and remote areas as well as strengthening the economy [89]. Similarly, council has a role in facilitating a partnership between local food producers and local outlets, to ensure that fresh produce is easily accessible [89]. This is important for providing fresh, healthy, and nutritious food and shortening the overall length of the food supply chain [89]. In addition, the large-scale nature of the food system makes it possible for the Yarra Ranges to source food from different parts of the country which provides security in an emergency disaster as food is able to be sourced from outside the region [89].

Although suggestions of increasing the variety of food outlets in certain areas were raised during the community consultations, this is something that cannot be addressed by a food security policy [88]. Yarra Ranges Council is unable to deny permits for food outlets based on the nutritional quality and pricing of their products. In saying this, the policy can guide council to advocate for the sale of fresh, nutritious and affordable local produce by providing intelligence to new businesses being established in the area thus encouraging responsible and sustainable practices. Additionally, this would hopefully assist in driving the priority area 'Localising the economy' in the Yarra Ranges Community Plan - Vision 2020, which outlines the desire to develop a suitable mix of shops that provide for both locals and tourists [28]. Localising the economy and providing access to food outlets with a variety of affordable, safe and nutritious foods also contributes to the social determinants of health [100]. This ensures that members of the community are provided with employment opportunities to sell their produce directly to local food outlets as well as equality of the price, quality and availability of nutritious foods in the Yarra Ranges.

Support during times of food insecurity and natural disasters

In the context of food security, an emergency situation can be defined as a time in which an individual is unable to access healthy, nutritious, culturally acceptable foods [1]. A person may be unable to access food due to food insecurity. A number of people in the Yarra Ranges are currently food insecure for a range of reasons such as financial difficulty, lack of transport or lack of knowledge around accessing and preparing food, and these people require assistance, at least in the short-term, to access sufficient nutritious food to maintain health [13]. However another situation in which people may be unable to access food is during an emergency or disaster such as a bushfire or flood. During these times roads may become inaccessible or people may be confined to their homes, limiting their ability to obtain food. There may also be a limited supply of food to the area during and after the event, resulting in a shortage of food to the region until the food supply can be re-established. Although these two situations occur for very different reasons, both leave individuals vulnerable to the effects of food insecurity, and the council must therefore have strategies in place to ensure that people have access to food during these times.

Although this policy for the Yarra Ranges will be a food security policy, the needs of more than 10,000 people living in the municipality who are food insecure cannot be ignored [15]. Food insecurity in the Yarra Ranges is caused by a number of factors identified earlier including low socioeconomic status, limited access to public transport and a high ratio of fast-food and take-away outlets to supermarkets and fresh food outlets [13]. Whilst the long term aim of the food security policy is to ensure the entire Yarra Ranges community is food secure, individuals who are currently unable to access appropriate or sufficient foods require short term assistance. The need to assist food insecure residents has been recognised by Yarra Ranges Council with the inclusion of a key priority area in their Municipal Public Health Plan which seeks to 'reduce food insecurity within the municipality by improving access to, and the affordability of nutritious foods [16].' The need to address this issue is further evidenced by its inclusion in a number of other current local food security policies [38,39]. Addressing food insecurity requires a multi-faceted approach involving not only providing short-term food relief through strategies such as emergency food relief services and food banks, but also addressing the underlying causes of food insecurity.

Although there are individuals suffering from food insecurity on a regular basis, it can be argued that the whole of the Yarra Ranges community are at risk of food insecurity, as an emergency event such as a bushfire or flood has the potential to leave everyone unable to access nutritious food for a period of time [101]. During stakeholder consultations, it was identified by many community members that developing strategies to ensure the whole community remains food secure following an emergency was important, particularly given the vulnerability of the region. Bushfires are a significant concern in the Yarra Ranges, as evidenced by the devastating effects of the 2009 Black Saturday bushfires [102]. In fact, the Yarra Ranges is considered to have one of the highest bushfire risks in the world [75]. In addition to this, flood, drought and a number of other emergency situations all have the potential to disrupt food supply to the Yarra Ranges. Therefore, it is important that the Yarra Ranges develops plans and strategies to ensure that residents remain food secure and are able to access nutritious, acceptable food during emergency situations.

Improving capacity and changing social norms

Capacity building was a notion that was raised frequently throughout the stakeholder consultations, and refers to 'the development of sustainable skills, structures, resources and commitment to overall health improvement in health sectors to prolong and multiply health gains [103].' Capacity building is seen as the invisible hand of public health promotion, increasing the range of people and communities that are able to address health problems [43]. In addition to this, building capacity also increases the success of health objectives and assists the community in becoming competent in managing their own health issues, increasing resilience in communities and creating more sustainable change with reduced reliance on outside organisations [43]. Promoting connected communities is a shared vision of the Yarra Ranges Council, who aim to build 'strong, healthy and connected communities;' a key point in the Vision 2020 plan [28].

Stakeholders consultations also indicated that the community believed council should support pre-existing local initiatives, a principle which is embedded in many capacity building and community development frameworks [103]. Initiatives that are linked into existing structures are more likely to be sustained [104]. It also builds the communities' confidence in existing initiatives which can contribute to increased support and greater opportunities for success.

In order to build capacity and empower the community, changes to the current attitudes and culture that exists within the community in regards to food preferences, purchasing trends and food growing practices at home need to be made. Sustainable behaviour change occurs best when supported by change in social norms and culture [104]. Capacity building and the shifting of attitudes and the social norm are essential for initiatives so they are viable, sustainable and produce improvements in food security in the Yarra Ranges.

Increasing skills and knowledge

Increasing skills and knowledge is a fundamental theme to facilitate food security within the Yarra Ranges, as it provides information and supports the capacity for individuals to choose, grow, prepare and serve healthy and sustainable food [105]. Knowledge and skills are central aspects of the social determinants of health, influencing the way an individual grows, lives and works. Furthermore, they are both identified in the food security framework as core factors that influence aspects of food security.

Knowledge refers to learning concepts, principles and/or information about food and health literature [106]. It influences the types, amount and frequency of food purchased and understanding of healthy eating, produce seasonality, variety and cost [107]. Food knowledge alone does not enhance food security [5], as an individual must have the skills to apply this information [107]. For example, having the skills to prepare and cook seasonal vegetables to create a balanced meal or the ability to grow fruit and vegetables in their own backyard.

The Yarra Ranges Community Wellbeing Plan 2010-2013 priority area one, the support of residents to achieve and maintain a healthy lifestyle, in addition to Vision 2020 and the Outer East Health and Community Support Alliance's priorities of promoting accessibly to nutritious foods underpins the inclusion of improving knowledge and skills in a food security policy [16,26,28]. The incorporation of

this theme has the potential to influence other identified determinants such as convenience, time, financial restraints and cooking facilities.

The Yarra Ranges Council will follow the lead of other municipalities who addressed this theme by emphasising the relationship between food, nutrition and health and encouraging of healthy eating practices to support the wellbeing of people [38,41]. Education was also addressed through the development of initiatives that increased knowledge about food, food preparation and production of environmentally sustainable food [38,39]. A limitation however of this theme is that an individual must be motivated and willing to improve their knowledge and develop new skills. Furthermore, they must have appropriate resources such as access to food [5,59,105,107].

5.4 Process for Developing a Food Security Policy

Figure 11 outlines a 16-step process that could be used to develop a food security policy. The steps included in the process were informed by the literature review, in particular the policy development processed used by other Victorian municipalities. Consultations with stakeholders also informed this process, particularly discussions with the Nourish Network and members of the Yarra Ranges Council.

The 16 step process includes the establishment of the need for a food security policy in the municipality, the formation of steering groups and goals and objectives, data collection, development of a background paper and draft policy, obtaining internal and external feedback on the draft policy and presenting the final food security policy to council for endorsement. Finally the process also includes a step which involves developing a yearly action and evaluation plan once the policy has been implemented. The creation of a food security policy development process begins to address a gap in the current public health nutrition evidence base as there is currently no published literature outlining the development of such a policy. This process can be used by other local government areas to inform and guide the development of a food security policy for their municipality.

5.5 Evaluation of the Project against Objectives

The objectives of the project altered throughout the nine week project period as the project outcomes changed. Initially a background paper on food security and a draft food security policy were to be produced for Yarra Ranges Council. However as the project progressed it was decided a food security policy directions paper would be more beneficial for the council, and thus the objectives were changed in accordance with the new project outcome.

Both objectives were met by the completion of the project, although to varying degrees. The first objective of increasing knowledge of community opinions of factors affecting access to and supply of food in the Yarra Ranges was met, however only to a certain extent. Due to the time constraints and resulting limited consultation period, individuals thought to provide the richest information were made a priority. This meant the majority of consulted stakeholders were of high power and high interest (predominantly council members and Nourish Network members). In addition to this a selection of stakeholders who were classified as subjects were also included in the consultation process. The selection of stakeholders consulted with, although providing rich information, did not include residents of the municipality and other identified stakeholders such as restaurant owners

and supermarkets. Ultimately only a selection of the community was consulted with, and thus the objective was only met to a certain degree. The information included in the final food security policy directions paper presented to the Yarra Ranges Council may not be reflective of the entire communities' perception of factors addressing food access and supply in the municipality because it was beyond the capacity of this project to consult with the entire community.

The project was able to meet the second objective as extensive literature searches which included grey literature were conducted to effectively describe the main themes, frameworks and determinants that influence food security, as well as the policy development processes used by other municipalities (refer to section 4.1 literature review results). The information found during the search was used to identify issues relevant to the municipality, inform the development of the final directions paper, and to develop a process for creating a food security policy. This increased the quality and quantity of information available to the Yarra Ranges Council to respond to the food security in the municipality was also successfully achieved. The data collected and collated for the project built on previous research in the area, however most of the previous research focused on food access. Consultation with food producers and suppliers during the project period has assisted in filling a gap in knowledge regarding food supply and its subsequent influence on food security in the region. The production of a food security policy directions paper which includes evidence found in both the literature and stakeholder consultations greatly increases the information available to the Yarra Ranges Council to address and take action on food security in the municipality.

5.6 Relevance of the Project to Public Health Nutrition

Implications of this project to public health practice in the region

This project has significant implications for public health in the Yarra Ranges, both in the short term and long term.

In the short term, the project has increased the quality and quantity of information available about food security in the municipality, as intended by the project objectives (see pp.4). The data collected and collated for this project builds on previous research completed in the area in 2008 and 2011 [13,19]. However, as most of this prior research focuses on food access rather than food supply, this project also acts to address a gap in the evidence by detailing specific information about the food supply in the region (and its subsequent impact on food security). Gathering strong local data has been outlined as pivotal for addressing food security, and is also an objective of the Nourish Network [19,23].

In addition to providing data, the stakeholder consultation process also had a reciprocal benefit of raising awareness about food security amongst people with power to facilitate change in the region. The consultations advocated to put food security on the council's agenda, encouraged council employees to consider the complex, multi-factorial nature of the issue and outlined the need for an integrated response that encompasses all council departments [47,108]. Furthermore, this directions paper provides a local evidence base which can be used as a tool to advocate to council decision makers about the importance of developing a food security policy for the region [47].

Development of a food security policy for the Yarra Ranges would provide a strategic framework to underpin future action on food security in the region. As outlined in section 2.4 (Why a food security

policy for the Yarra Ranges?); a food security policy is relevant and important for public health for a number of reasons. In particular, 'building healthy public policy' is one of the 5 key action areas of the Ottawa Charter for Health Promotion and having a policy contributes to creating settings and environments that support food security [45]. Additionally, as policy sets the scene for a long term, preventative approach with a whole of community focus, it ensures that future action does not rely solely on a reactive solution to food insecurity (such as emergency food relief) [5]. Rather, it facilitates a proactive approach that addresses the determinants of food security to enable access and supply of food to the whole community that is equitable, economically viable and sustainable, as per the project goal (outlined on pp.4).

As such, in the long term a food security policy is significant for public health as it assists to achieve the vision of this project; to improve food security amongst residents in the region (consequently reducing the number of people who are food insecure) [16]. This is important for health outcomes in the region as food security ensures people have access to nutritious foods. The link between regular consumption of nutritious foods (as part of a balanced diet), improved nutritional status and reduced risk of chronic disease has been clearly demonstrated [109]. This is important for the region as reducing the prevalence of diabetes and obesity is a key health priority area [16]. Increased food security also has the potential to provide several other positive outcomes on a community level, including contributing to a vibrant local economy by supporting a strong and resilient food supply and ensuring there is a healthy, productive workforce available [88,89]. Action to improve food security also assists to build individual capacity, increasing the ability of community members to take control over their own health and lives [43]. These outcomes, among others, contribute to creating a healthy, resilient and vibrant community in the Yarra Ranges [29,88].

Broader implications of this project for public health nutrition

The content of this paper outlines a process for developing a food security policy Refer to figure 10. It has compiled a significant amount of literature, including specific details of the policy development process used by several other Victorian municipalities. This is significant for public health nutrition practice, as previously outlined section 5.1 (literature search discussion) there is currently no published literature outlining the entire process of developing a food security policy for a local government area. Consequently, this project has begun to address a gap in the public health nutrition evidence base.

Taking the next step to publish the process would further address this gap, by increasing and strengthening the evidence base of literature available. Publication would make the information gathered and compiled by this paper readily available to the wider community. Consequently, the publication would provide an evidence-based model for other councils to work from and adapt to their specific situation. This has the potential to reduce the resources (including time) required to develop a food security policy, making it easier for local governments to provide a strategic framework to underpin future action on food security in their municipality. As incorporating food security into council policy is one way VicHealth suggests local government can act on food security, this would assist to address food security in other local municipalities [89].

6.0 Recommendations

Based on the results from the literature reviews, the stakeholder consultations and the overall experience of conducting the project a number of recommendations have been made. The recommendations will provide Yarra Ranges Council, in conjunction with the Nourish Network, suggested future directions to be taken in regards to a food security policy for the municipality, recommends additional research that would add to the current evidence base available and ways in which the completed project could have been improved.

Recommendation 1: Develop a food security policy for the Yarra Ranges

This food security policy directions paper was created in order to inform a food security policy for the Yarra Ranges Council. The importance of having a policy for the municipality was clearly outlined in section 2.4 (why a food security policy for the Yarra Ranges ?). As such, a pivotal recommendation for the Nourish Network is to work in conjunction with the Yarra Ranges Council to use the evidence base presented in this paper to develop a food security policy. The actions listed below are recommended to guide the process of developing the policy:

a)   **Obtain council support for the development of a food security policy**

Provide a formal presentation to council outlining the importance of a food security policy and gain their support for developing the policy [Isha Scott Yarra Ranges Council, personal communication, 2012 Oct 2].

b)   **Develop a draft food security policy for the Yarra Ranges**

Develop a draft food security policy based on the results and discussion (of the literature reviews and stakeholder consultations) presented in this paper [39,40,Melissa Morrison, City of Melbourne, personal communication, 2012 Sept 25], as this data provides a strong evidence base for policy formulation [44].

c)   **Seek internal and external feedback on the draft food security policy**

Obtain approval for the draft food security policy from the Yarra Ranges Council Chief Executive Officer and the Strategic Leadership Team and release it for internal (council) feedback, and external (public) comment for a one month period [3,40,Isha Scott Yarra Ranges Council, personal communication, 2012 Oct 2, Melissa Morrison, City of Melbourne, personal communication, 2012 Sept 25] . Possible methods for seeking comment include online forums and online and hardcopy surveys, as per the IAP2 Public Participation Spectrum described by the Yarra Ranges Council Essential Engagement resource [78]. It is important that online methods aren't solely used to seek comment, as this may unfairly exclude community members who don't have computer/internet access [80]. It is also important to provide stakeholders involved in the consultation process with a copy of the draft policy [Melissa Morrison, City of Melbourne, personal communication, 2012 Sept 25], not only to keep them informed of the policy's progress, but to further seek their expertise to ensure the policy accurately represents the complex and unique nature of food security in the region. Not all stakeholders invited to be involved in consultation were available during the consultation period, so particular care should be taken to ensure they are encompassed in the feedback process. A list of these stakeholders has been provided in appendix 6.

d) Develop and endorse the final food security policy

Develop the final food security policy for the Yarra Ranges by integrating internal and external feedback into the draft policy and present it to the Yarra Ranges Council Chief Executive Officer and the Strategic Leadership Team for endorsement [Isha Scott Yarra Ranges Council, personal communication, 2012 Oct 2]. After endorsement is obtained, disseminate the policy internally and externally to raise awareness and create accountability for action [38]. An internal policy steering group should also be established (if not already completed earlier in the process), to act as 'drivers' for the policy and subsequent actions [38].

Recommendation 2: Proposed contents of a food security policy for the Yarra Ranges

a) Define the policy vision

A policy vision helps to provide guidance and strategic direction for the Yarra Ranges Council. It outlines where the council is headed, what they aim to achieve in the future, as well as committing to facilitating change [28].

A possible vision for a food security policy for the Yarra Ranges could be:

'To improve food security amongst residents living in the Yarra Ranges by ensuring availability and access to safe and nutritious foods at all times without having to resort to emergency food sources.'

b) Support with a food security framework

A food security policy for the Yarra Ranges should be underpinned by a strategic framework that considers the multifactorial nature of food security. Framework option one which was identified in section 4.1 (literature review results) encompasses all aspects of food security on an individual, household, community, national and global scale and would be appropriate to underpin the development of a food security policy for the Yarra Ranges.

c) Identify the council's guiding principles

The following examples of fundamental principles could guide the council's strategic directions for improving food security in the Yarra Ranges:

i. Access to safe, nutritious and affordable food is a basic human right to which all residents of Yarra Ranges are entitled.
ii. The social, economic, cultural and physical environments in which individuals live either enable or hinder them from being able to make healthy choices in the first instance. Individual choice is significantly diminished in the context of structural factors.
iii. The Yarra Ranges Council is committed to ensuring a collaborative effort by the community, service providers and all levels of Government to ensure improvements in food access and food supply at the local level occur.
iv. Council recognises that barriers to food security are entrenched in determinants of health such as access to housing, employment, income, education, social inclusion, gender and transport.

d) Present policy themes

Drawing on the results of the thematic analysis of the stakeholder consultations, there are seven key themes that are appropriate to be included in a Yarra Ranges food security policy.

   i.   A commitment to responsible land use planning
   ii.   Support for local agriculture
   iii. Moving towards a sustainable food environment
   iv. Creating a diverse and resilient food supply
   v.   Support during times of food insecurity and natural disasters
   vi. Improving capacity and changing social norms
   vii. Increasing skills and knowledge

It is envisioned that the 8th theme – strategic policy directions and principles – would be used to inform the vision and principles of a food security policy. An explanation of each theme and its relevance to the Yarra Ranges was outlined in Section 5.3 (stakeholder consultation discussion).

Recommendation 3: Implementation of the policy

Once a food security policy for the Yarra Ranges has been developed and endorsed, council and supporting organisations such as Nourish Network must ensure the policy is implemented. Whist the policy is intended to provide strategic directions regarding food security actions must be undertaken to ensure the policy is implemented and used to influence food security in the Yarra Ranges [5].

a) Develop an action plan

An action plan must be created in response to the policy. This outlines the steps that will be taken in order to implement the policy and meet project objectives [43,110]. An action plan should include what strategies will be undertaken, who will be responsible for each activity and what resources will be required [43,111]. During community consultations, a number of potential strategies were suggested by community members. A list of these strategies is provided in appendix 7. While this table is not an exhaustive list, it outlines suggestions made by stakeholders and may provide a starting point for council when considering potential activities that could be undertaken. An action plan should be developed every year outlining the year's activities, as this is necessary to reflect the progress made in addressing food security and ensures that strategies remain up-to-date and are evaluated regularly [43,110].

b) Evaluate the policy and action plan

Both the policy and action plan must be regularly evaluated to ensure they remain up-to-date and are meeting goals and objectives [39,110]. Both the impact and outcome of the intervention, as well as the intervention itself must be evaluated and results incorporated into future activities to ensure continual improvement [39,43,76]. After 4 years, the policy itself should be reviewed to ensure it remains aligned to the councils overall vision and still addresses food security issues in the Yarra Ranges [39].

c) Continue to monitor food security in the Yarra Ranges

It is important that food security in the Yarra Ranges is continually monitored to detect changes, with factors such as food price, determinants of food security and at risk populations being monitored [13,19]. The Nourish Network has a good record of continually monitoring food security, as evidenced by the research completed in 2008 and 2011[13,19]. The Nourish Network with support from the Yarra Ranges Council should continue this monitoring to detect trends and any changes regarding food security in the region, as this will inform further strategies undertaken to address food security issues [43].

Recommendation 4: Benchmark other local government strategies and policies that address food security

Several stakeholder consultations recommended benchmarking the policies and strategies that are used by other councils to address food security. This project initiated the benchmarking process by describing the policy development process undertaken by other Victorian municipalities. However, undertaking a complete benchmarking analysis (including budget, resources, etc) of these food security policies, as well as strategies that address food security, was beyond the capacity of this project (due to limited resources, particularly time). Hence, it is recommended that a benchmarking process is undertaken prior to creating a food security action plan, in order to discover best practice strategies for addressing food security in a local government area [111]. The process of benchmarking is important for the Yarra Ranges Council, as it will allow them to adopt and improve on strategies and practices known to be successful, whilst avoiding those that are ineffective [86,111]. This will help them to achieve greater efficiency and will lead to improved outcomes for the community [86,111].

Recommendation 5: Publish the policy development process

As outlined in section 5.6 (implications for public health nutrition), this project contributes significantly to public health nutrition as it provides a description of the process of developing a food security policy; addressing a gap in the currently available public health nutrition literature. Hence, once the Yarra Ranges food security policy is developed, it is recommended that the entire development process is documented and published. The published document should incorporate evidence presented in this paper, as well as details of any subsequent evidence gathered and action undertaken to develop the final policy. Benefits of publishing this information have been outlined in section 5.6 (implications of the project).

Recommendation 6: Ways in which the project could have been improved

The outcome of this project was to produce a food security policy directions paper for the Yarra Ranges Council to assist the council in taking future action to improve food security within the municipality. This was successfully completed at the end of the project period. Upon reflection and evaluation of the processes used throughout the 9 week project period, a number of ways the project and the quality of information collected and produced could have been improved have been identified.

a) The use of a longer stakeholder consultation period

Due to the limited time available for the completion of this project only a two week stakeholder consultation period could be used. As indicated in section 5.1 (literature review discussion) other council areas with a food security policy had a longer stakeholder consultation period than that available for the production of the food security policy directions paper for Yarra Ranges Council. The limited time available to consult with stakeholders meant that certain stakeholders (mainly council members) took priority over other stakeholders (such as resident and restaurant and café owners) and thus not all identified stakeholders were able to be included in the consultation process. All stakeholders deemed to be of high interest and power could not be consulted with as some were unavailable during the two week period, resulting in a number of key stakeholders perceptions about food security not able to be included in the analysis. A longer consultation period would have allowed time for a greater number of identified stakeholders to be contacted, thus increasing the data gained during this period and potentially improving the degree in which the information presented in the final document reflected the opinions and ideas of the Yarra Ranges community. As evidenced in section 5.5 (evaluation of the project), a longer consultation period may have also enabled objective one to be achieved in full. It is recommended that a longer stakeholder consultation period be used in similar projects in the future.

b) Use of additional consultations methods to encompass a larger number of people

Due to the minimal time available for stakeholder consultations focus groups and semi-structured interviews were the consultation method chosen (see section 5.3). Ideally a larger range of consultation methods including surveys and discussion forums would have also been utilised, similar to those used by other council areas in the development of their food security policies (see section 4.1). The use of a larger range of consultation methods would enable a larger proportion of the community to be included in the consultation process, potentially increasing the quality of the data collected and ensuring the data presented at the completion of the project was truly reflective of the entire community [49]. Instead only certain subgroups of people were able to be consulted with using the few methods chosen. In future a more extensive range of consultation methods that allows the involvement of a wider range of community members would be recommended.

c) Early establishment of clear project timelines, activities and outcomes

The intended outcome of this project and the project objectives changed throughout the project duration (see discussion about project objectives) making it difficult to set clear timelines as there was a not a concrete goal to work towards. The establishment of a concrete project outcome earlier in the project period would have enabled clearer timelines to be set, given a better indication of the activities that needed to be undertaken to achieve the set objectives and would have allowed a continued focus on the final product of the project. In future projects it is recommended that a clear outcome and timeline be established early in the project as a means of ensuring the best possible project outcome is achieved [43].

7.0 Conclusion

Food for Thought: A Strategic Approach Underpinning Action on Food Security in the Yarra Ranges has resulted in the development of a food security policy directions paper which provides evidence to the Yarra Ranges Council. This document can be used to advocate for the development of a food security policy for the region. A policy and its subsequent action plan would assist to facilitate access to and supply of food to the community that is equitable, economically viable, sustainable and reflective of the unique characteristics of the municipality.

A range of literature was reviewed in a number of key areas including food security frameworks, key themes in food security policies, determinants of food security in the Yarra Ranges and the development process for a food security policy. This has increased the quality and quantity of information available to the Yarra Ranges Council when developing their response to food security in the region. This has been achieved by identifying an appropriate food security framework which underpins action on food security in the Yarra Ranges, investigating causes of food insecurity in the region, identifying key themes included in other food security policies and understanding the policy development processes used by other Victorian municipalities when developing their food security policies. Not only did this information inform the type of stakeholders who were interviewed during the consultation period and the questions they were asked, but also sought to address gaps in the evidence including information about factors affecting the food supply in the Yarra Ranges.

Thematic analysis of the qualitative data collected during focus groups and semi-structured interviews identified the following key themes:

- Strategic policy directions and principles
- A commitment to responsible land use planning
- Support for local agriculture
- Moving towards a sustainable food environment
- Creating a diverse and resilient food supply
- Support during times of food insecurity and natural disaster
- Improving capacity and changing social norms
- Increasing knowledge and skills

This information has increased Yarra Ranges Council's understanding of key stakeholder opinions of factors affecting food access and food supply in the region and potential actions which could be taken by council to address this issue. These themes will assist in establishing a food security policy for the Yarra Ranges, with the first theme able to be used to form the vision and guiding principles of this policy.

This project has also compiled a significant amount of literature which outlines a process for developing a food security policy including the processes used by several other municipalities in Victoria. Currently there is limited evidence available to guide the development of a food security policy. If the information gathered and compiled in this paper was published, this would increase the evidence base available for other municipalities interested in developing a food security policy.

8.0 Appendices

Appendix 1. Comparison of SEIFA quartiles of suburbs in the Yarra Ranges (white indicates highest SEIFA and dark purple indicates lowest SEIFA)
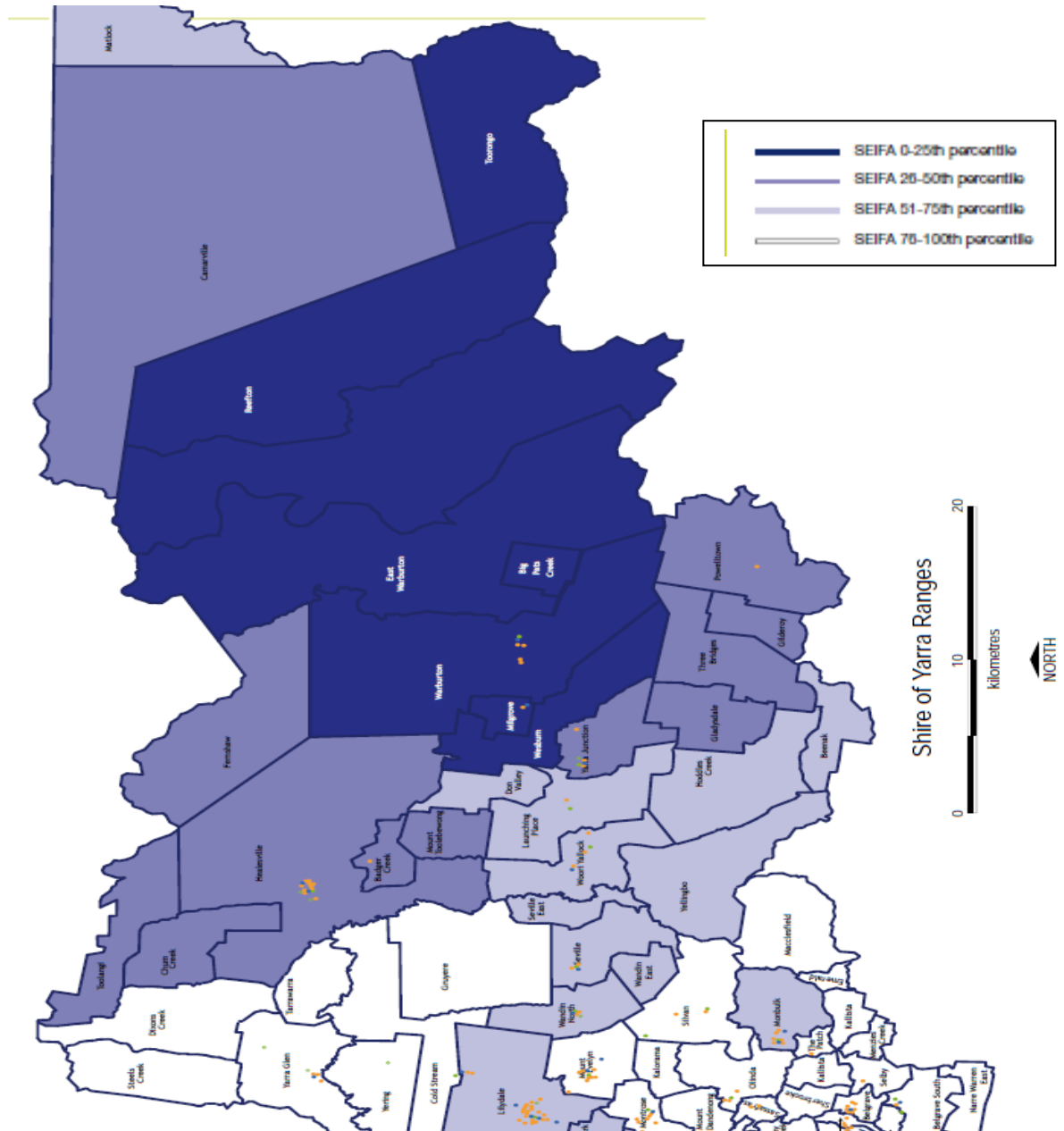
Directly from: Outer East Health and Community Support Alliance (OEHCSA). Outer East Community Food Access Research Project: Food security assessment and plans for a way forward [monograph on the internet]. Ringwood: Outer East Primary Care Partnership; 2009 [cited 2012 Aug 25]. Available from:
http://www.oehcsa.org.au/sites/www.oehcsa.org.au/files/public_library/2009/06/284025-upload-00001.pdf

Appendix 2. Public Health Nutrition Practice Bi-cycle Model

Intelligence

1 Community Analysis and Engagement

Analysing the structure and attributes of the community and involving the community in intervention management from the outset.

2 Problem analysis

Clarifying and describing the nature and impact of the problem/issue, answering the question "is action needed?"

3 Stakeholder analysis and engagement

Identifying and understanding various stakeholder agendas, in order to engage appropriately and build capacity.

4 Determinant analysis

Analysing the social, economic, environmental and individual determinants of PHN problems, including the sequence of causation.

5 Capacity analysis

Analysis of existing capacity /capacity gaps for action in order to focus capacity building strategy.

6 Mandates for action

What government or institution policy mandates exist that can help support your call for action.

7 Intervention research and strategy portfolios

Understanding and learning from the experience of earlier interventions. Ensuring a thorough canvassing of all strategy options and relevancy.

8 Risk analysis and strategy prioritisation

Asking questions such as what can go wrong if we successfully achieve change in determinants. Prioritising strategies based on assessment of "best bets".

Action

9 Writing statements for action (goals and objectives)

Statements that codify intervention intent and targets for change.

10 Logic modelling

The logic sequence that links an understanding of the problem, determinants with strategies and evaluation measures. A conceptual device to enhance quality of intervention management. Includes testing feasibility amongst stakeholder groups to ensure strategies have support, meet needs and test assumptions.

11 Implementation and evaluation planning

Detailing the logistics of work required, budgeting and resource management and scheduling.

12 Managing implementation

The "doing phase" of interventions and related monitoring of implementation to ensure implementation sticks to the plan, are completed and are ready for evaluation.

Evaluation

13 Process evaluation

Evaluating if the strategies have been implemented as planned.

14 Impact and outcome evaluation

Evaluating if objectives and goals are achieved.

15 Evaluating capacity gains

Evaluating capacity gains that help explain intervention effects and predict sustainability.

16 Economic evaluation

Economic analysis of costs and/or benefits/outcomes of an intervention to assist value judgements about economic efficiency.

17 Reflective practice and Valorisation. (dissemination of learning)

Intelligence based on lived experience of the intervention by practitioners, observations, insights etc. Sharing key learnings/intelligence so that it is integrated into and enhances future intervention research/practices.
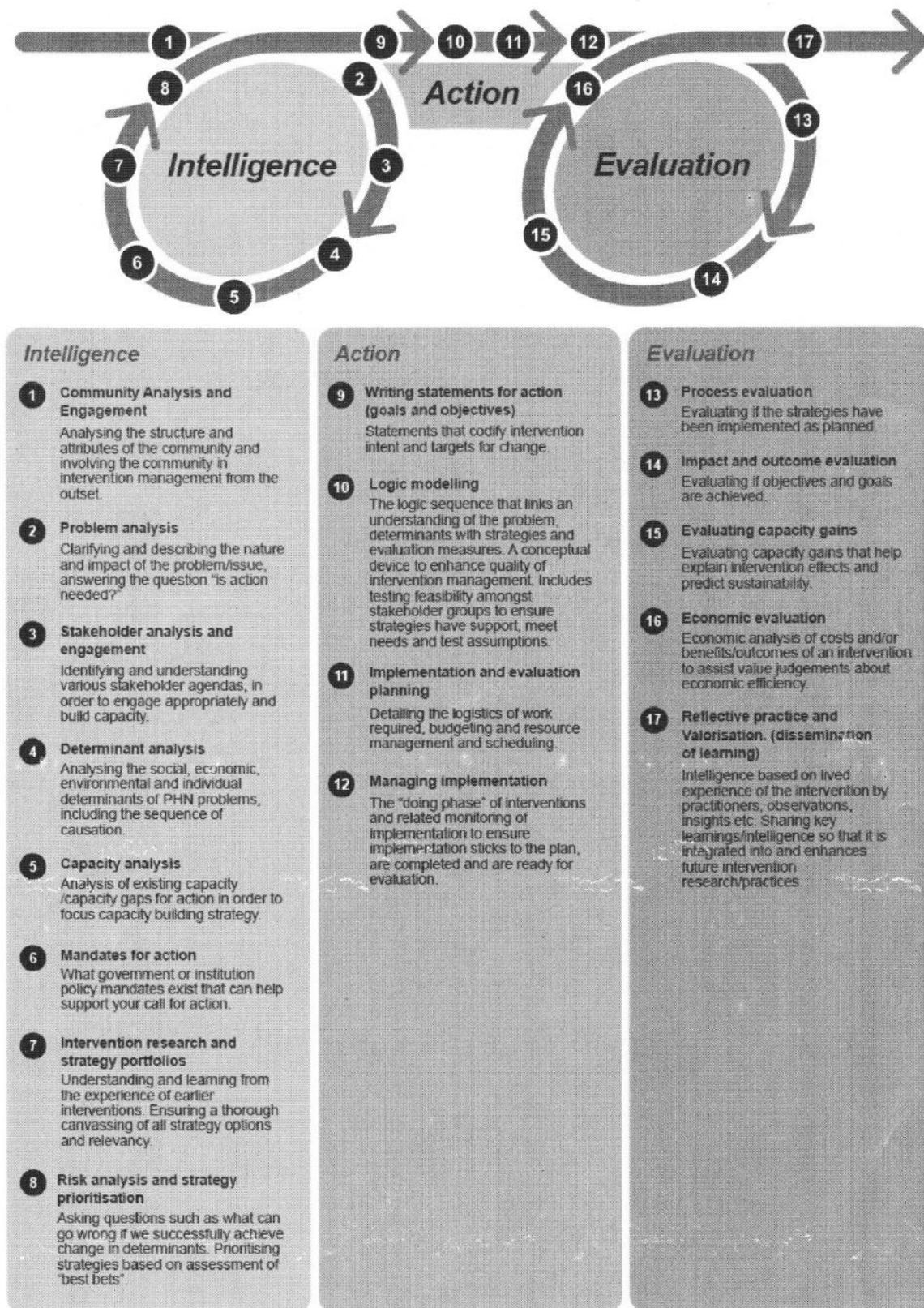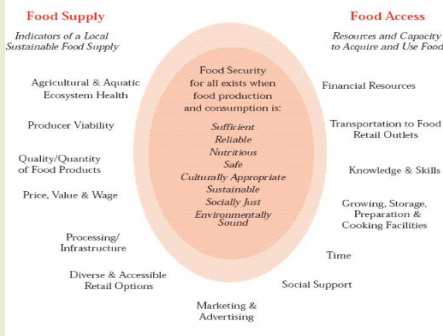
Figure directly from: Hughes R, Margetts BM. Practical public health nutrition. United Kingdom: Wiley-Blackwell; 2011.

Appendix 3. Food Security Framework Analysis

Framework Model	Advantages	Disadvantages
Option 1 [1] 	This framework design includes a series of integrated circles which systematically represents the different factors that influence food security, and thus demonstrates the interconnectedness of each factor. By highlighting the different levels that affect food security, from a broad to narrow effect, it provides a holistic approach to this issue. This framework provides detail of the individual impacts that are specific to the Yarra Ranges community. These include cultural identity (Indigenous population), living conditions (homeless, public housing, emergency centres), household structure (single parents) in addition to age (elderly or young children). Additionally, this model has a strong emphasis on sustainability and urban planning through identifying various factors that influence the sustainability of environment and food supplies, and therefore provides structure to address them at different levels, such as the distant to transport and shops, transport options, location of food outlets and car dependency. It also addresses bigger issues at a community level such as land and water resources and their preservation and climate change. These factors are related to the unique characteristics of the Yarra Ranges' environment, reflective of its food deserts and strong agricultural ties. Lastly, this framework incorporates social supports, which allows the Shire's existing programs that assist with this issue to be taken into consideration, as well as addressing social 'norms' & attitudes.	This framework design identifies levels outside the control of local government and thus its policy. Global and national factors cannot be directly addressed by this policy. Secondly, it only implies but does not highlight that the main factors of food can be grouped into food access and supply. Finally, whilst this model incorporates knowledge, it does not acknowledge education or employment which are determinants of food security.
Option 2 [2] 	The conceptual layout of this model is simplistic and demonstrates the importance of the food supply and access to food in addressing food security. It focuses upon a local food supply, making it specific to the Yarra Ranges. It incorporates key themes including education, through knowledge, skills and promotion; support in emergency situations through social support; and urban planning by identifying the issues of location and variety of outlets in the community. Through its central definition of food security, it acknowledges food to be 'acceptable' and thus covers cultural aspects that are relevant to high risk minority groups living in the Yarra Ranges Other included details include the identification of those at risk due to mobility issues (elderly, disabled), financial difficulties and poor knowledge and skills (low SES or education).	This model focuses on a one-dimensional approach to food security; it does not identify the different levels that affect food security, such as an individual, household and community and thus the collaboration that is required to address this issue. Additionally, this layout suggests food supply and food access are separate issues rather than being interconnected. Whilst sustainability is identified this model doesn't consider the environment. The use of the word food outlet does not address other food sources such as local markets or home-grown products that are common in the Yarra Ranges. Lastly, a number of factors are not addressed including transport, storage, social norms and culture.
Option 3 [3]	This framework emphasises a sustainable local food supply in addition to encompassing factors	This model doesn't consider factors which impact on an individual level including living

Figure 1. Determinants of Food Security[3]

that are applicable to the Yarra Ranges such as culturally appropriate, socially just and environmentally sound. It identifies important issue for the region including ecosystem health, which is reflective of diverse geographical nature of the region and land used for farming.

Additionally, this framework acknowledges producer viability and diversity, incorporating local suppliers or markets rather than just food 'outlets'. This is necessary as the Yarra Ranges has a number of different food sourcing methods that individuals use.

The definition used at the centre of the model reflects that of the projects, with food security including culturally acceptable food, a factor that other models have not encompassed.

conditions, preferences or social influences. It also does not include storage of food.

As with previous models, this framework does not differentiate the variety of levels at play regarding food security (individual, household, community).

This layout suggests food supply and food access are separate issues rather than being interconnected and thus doesn't illustrate the impact they have on one another.

Option 4 [4]
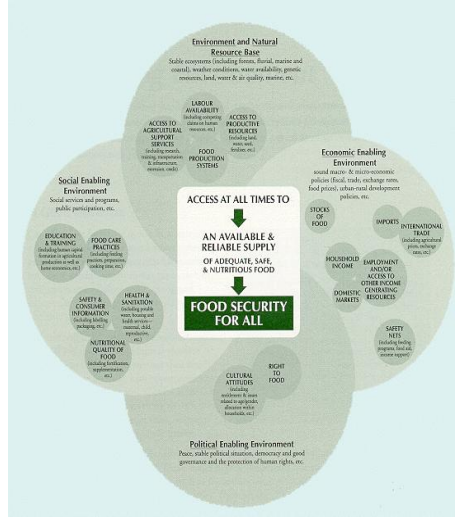
This model has a unique design compared to the other identified frameworks. It has a holistic approach through the integration of economic, social, political and environmental environments. This venn-diagram illustrates the overlapping of each area indicating the collaboration that will need to exist between the different areas of council and within the community.

A unique aspect of this model is that it addresses domestic markets, food production systems and access to agricultural support services, which would be transferable to the Yarra Ranges.

This framework is less detailed compared to the other frameworks, allowing for greater scope and potential for areas of change by the council.

A limitation of this design, similar to options two and three, is that it does not specifically address the multi-level impact and approach that food security requires. Additionally, it includes aspects that are not relevant such as imports and international trade.

Appendix 4. Key themes in food policies

Policy	Key themes
Canada's Action Plan for Food Security [4]	• Creating an enabling environment • Increased access to nutritionally adequate food • Sustainable food production • Monitoring the food system • Support in emergency situations
City of Casey Draft Food Security Policy [5]	• Food sensitive planning principles in urban design • Reduction and redistribution of waste • Supporting self-reliance • Strengthening partnerships with other governments and organisations • Support and advocacy for food security
City of Darebin Food Security Policy [6]	• Advocacy for food security • Sustainability • Accessible urban environment • Building partnerships with other governments and organisations • Leading by example through council activities • Building community resilience • Increasing knowledge about food security in the region
City of Melbourne Food Policy [7]	• Creating a strong, food secure community • Healthy food choices • Sustainability and resilience • Supporting the local food economy • A city that celebrates food
Hobsons Bay City Council Food Security Policy Statement [8]	• Advocating for food security e.g. resources • Creating an urban environment that supports food security • Education about healthy and sustainable eating • Support in emergency situations • Encouraging healthy eating
Maribyrnong City Council Food Security Policy [1]	• Collaboration with other governments • Creating environments that support food security • Advocating for resources and governmental support of food security • Building community resilience • Research, monitoring and evaluation of food security
NSW Food Security Options Paper [2]	• Creating partnerships • Research, monitoring and evaluation • Advocacy for food security • Increasing variety of food businesses • Education about food and nutrition • Emergency food support • Increased affordability of food • Increased access to a variety of foods
Recipe for Success – Scotland's National Food and Drink Policy [9]	• Supporting the food and drink industry • Healthier food choices • Sustainable food choices • Availability and affordability of food • Creating a secure, resilient food system • Education about food • Secure and resilient food system

Tasmanian Food and Nutrition Policy [10]	• Support food production in Tasmania • Support food businesses in Tasmania • Promoting environmental sustainability • Promoting healthy eating to decrease disease • Increased breastfeeding • Increased food safety • Support for vulnerable groups
Vancouver Food Charter [11]	• Ensuring sustainability • Reduction and redistribution of waste • Supporting local food systems • Accessibility and affordability of food • Collaboration with other governments and organisations • Celebrating food

Appendix 5 – Consulted stakeholders

Description of Stakeholder	Stakeholder classification	Method of consultation
Family Planning, Yarra Ranges Council	Player	Focus Group
Environment Department, Yarra Ranges Council	Player	Focus Group
Dandenong Ranges Emergency Relief Services	Subject	Interview
Transition Towns Groups	Subject	Focus Group
Economic Development, Yarra Ranges Council	Player	Interview
Healesville Community Garden Committee Meeting	Subject	Focus Group
Fruit & Vegetable Retailer, Healesville	Subject	Interview
Tecoma Community Kitchen Garden	Subject	Focus group
Community Development Officer for Bendigo Bank/Involved in development of Koha café	Subject	Interview
Inspiro Community Health Service/Member of Nourish Network (dietitian)	Player	Interview
Morrison's Community Garden Steering Group Meeting for Mt Evelyn Food Market	Subject	Focus Group
Strategic Planning Officer, Yarra Ranges Council	Player	Interview
Service Access Coordinator, Yarra Ranges Council	Player	Interview
Community Compliance, Yarra Ranges Council	Player	Interview
President of Yarra Glen Chamber of Commerce / Yarra Glen Quality Meats	Actor	Interview
LinC	Subject	Interview
Age and Disability Services, Yarra Ranges Council	Player	Interview
Community Climate Change Officer, Yarra Ranges Council	Player	Interview
Emergency Management, Yarra Ranges Council	Player	Interview
Tecoma Village Action Group	Subject	Interview
Indigenous Officer, Yarra Ranges Council	Player	Interview
Gateway Hydroponics	Subject	Interview
Organic Farmer	Subject	Interview
Yarra Valley Community Health Service/Members of the Nourish Network (2 dietitians and health promotion worker)	Player	Focus Group
Outer East Primary Care Partnership/Member Nourish Network	Player	Focus Group

Appendix 6 – Identified stakeholders who weren't consulted with for a variety of reasons

Emergency Food Relief	Chamber of Commerce/Traders Groups
- Healesville Interchurch Community Care Inc. (HICCI) - Salvation Army - Anglicare - Careforce Community Services - Monbulk Care Network - Melba Program - Valley Community Care	- Belgrave Traders Association - Healesville Chamber of Commerce - Lilydale Chamber of Commerce - Mt Evelyn Chamber of Commerce - Monbulk Business Network - Montrose Township Group - Mooroolbark Traders Group - Wandin Traders Group
Township Groups	**Council Members**
- Healesville and District Township Group - MAP Mooroolbark - Millgrove Residents Action Group Inc. - Monbulk and District Community Opportunities Working Group - Seville Township Group - Upwey Township Group - Yarra Glen and District Township Group	- Moulisa Sahai (Planning services) - Angus McGuckin (Planning services) - Jacquie Handsen (Planning services) - Ben Bainbridge (Parks and facilities) - Greg Box (Arts, culture and heritage) - Marion Greig (People and performance) - Zoe Stephens (Environment) - Ian Ada (Agribusiness)
Community Gardens	**Community Kitchens**
- The Bridge Community Garden Centre - Birdsland Community Garden	- Mooroolbark Baptist church - Coldstream community kitchen
Fruit and Vegetable Producers	**Mental Health**
- Brad's Produce - Chappies - Cherryhill Orchards - Fairview Hill - Giverny Estate - Maroondah Orchards - Harvest of the Yarra Valley - Kookaberry Strawberry Farm - Maggie's Seasonal Produce - The Cherry Boys - Victorian Strawberry Fields - Wandin Valley Farms - Wild About Fruit Farm Shop	- EACH - Melba Support Services - Community Access Mental Health Alliance
Farmers Market	**Other**
- Mt de Lancey Farmers Market - Yarra Valley Regional Food Group Farmers Market - Healesville Organic Farmers Market	Agribusiness Yarra Valley

Appendix 7. Strategies suggested during consultations

Theme	Examples of strategies
Support for local agriculture	• Increase the number of farmers markets within walking distance of main towns through grants, streamlined permit processes and providing facilities • Support roadside fruit and vegetable trading through streamlined permit process, relaxed laws regarding signage and increased promotion • Encourage community supported agriculture • Promoting Yarra Ranges branded foods • Maintain opposition to genetically modified crops • Support smaller growers through financial assistance • Support for seasonal workers such as housing options • Advocacy for local produce in homes, restaurants, cafes and supermarkets • Ensure that available fertile land owned by council is being used for farming
A commitment to responsible land use planning	• Planning to allow communal spaces for growing food such as community gardens • Increase ability of individuals to access shops using public transport and footpaths • Investigate new ways of growing food in an urban environment e.g. planting on roofs, on nature strips, in parks and gardens (creating edible landscapes) • Consider increasing housing density, especially around main towns • Ensure agricultural land is preserved
Improving capacity and changing social norms	• Encourage people to eat in a social environment • Increased indigenous access to services • Utilise existing initiatives when planning new strategies • Encourage communities to take responsibility for growing food in their local areas • Encourage and support social enterprises that benefit food security • Establish a volunteer base to support initiatives and programs • Ensure that council considers food security and culture in every policy and plan
Moving towards a sustainable food environment	• Maintain opposition to genetically modified crops • Ensure water sources required by local farmers are protected • Increase local and home grown foods to decrease food miles • Educate individuals regarding composting and growing produce in gardens

Creating a diverse and resilient food supply	• Increase the number of small businesses • Increased diversity of food outlets • Encourage developers to reconsider using big supermarket chains as an anchor point for new areas to attract other businesses • Encourage availability of local produce at large food outlets • Consider development of an abattoir in the area • Encourage partnerships between markets, retailers and suppliers
Support during times of food insecurity and natural disasters	• Support food banks and emergency food relief and encourage the provision of nutritious foods and these locations • Utilise current services to provide food to isolated people e.g. HACC, meals on wheels • Educate HACC workers regarding food security and their role in preventing food insecurity
Increasing skills and knowledge	• Education that utilises current services e.g. community kitchens, rate notices, libraries, online media • Forming partnerships with organisations in order to provide education • Community based cooking classes supported by local businesses • Education about growing your own food including awareness of seasonality, planting guides, preparation of seasonal produce • Education in schools regarding healthy foods and growing your own foods • Provide cooking tips and recipe ideas • Build understanding of food security within council • Provide information regarding how and where to access affordable, nutritious food

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Appendices

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