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How might we develop a food system that benefits everyone in the community

Kellogg Rural Leadership Programme

Course 44 2021

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Executive Summary

In this project I considered the question “how might we develop a food system that benefits everyone in community?” I ask this question because there are two sides to our current food system. We have a highly productive and well-functioning export system bringing benefit to the New Zealand economy, yet domestically we have people struggling to access healthy food. Some may suggest this is a social sector issue but I’d argue that when a significant number of New Zealanders are reliant on charities for food then there is something inherently wrong with our food system.

I conducted 45 interviews with people from right across our local community including farmers, business, iwi, local government, social services, beneficiaries and youth. What was broadly evident from the interviews was that there was a dissatisfaction with our current food system and a belief that it is failing people within our community. People commented on how there seemed to be a lack of thought regarding ensuring food production is protected and that people have access to food. Many raised concerns about how health was being impacted by poor quality food. The shift from localism to a centralized food system was also a subject of concern that was regularly raised.

In looking at the personal experiences of people who had been through food insecurity and lessons from past generations a common theme was raised of the importance of self-sufficiency skills like gardening, hunting, bartering and trading. The importance of community, whanau and having good networks was also highlighted. The case study of Taumarunui Whakaarotahi Trust demonstrates at a practical level how the unique strengths of rural New Zealand can be better utilized to develop a food system that benefits everyone in the community. There is much that can be achieved by local communities in collaboration with the primary industries. However, there are regulatory roadblocks that need to be addressed by Government to enable a thriving local food system to develop. The potential benefits of developing such a food system are wide ranging, impacting poverty, physical and mental health, increasing community connectedness and resilience, stimulating regional economies and reducing CO2 emissions. In making my recommendations I considered the enormous pressure Covid-19 has placed upon our local communities, the primary sector and Government. I therefore focused mainly on areas of collaboration, how we could build on current initiatives and better utilize our strengths.

Recommendations:

(Community/Local Govt/ DHBs)

- Consult widely amongst the community to avoid making assumptions about who is interested in food security and who can help bring solutions
- In designing a food system to benefit community consider the unique strengths of the area and the strengths and values of the people within your community

(Primary Industries)

- Connect with Kore Hiakai and be part of food security conversations to investigate ways to better integrate current food security initiatives with education from food producers regarding how that food is grown.
- Horticulture industry to partner with community and marae-based gardens and offer advice as part of fulfilling their vision of ‘healthy food for all, forever’
- Partner with Government and local communities in developing models to help small landowners be profitable and develop pathways for people to get into land ownership

(Government)

- Increase access via changes to food safety regulations and reducing barriers to cottage food industry
- Increase regulation of processed foods high in sugar/salt and saturated fats with the aim of reducing the availability and marketing of unhealthy food – particularly to children.
- Establish a national food strategy that involves enabling and facilitating the creation of local food systems
- Utilize Pamu farms to experiment with stacking enterprises appropriate to the local area to identify diversification opportunities for small landowners and increase participation in food production.

Acknowledgements

He hōnore, he korōria ki te Atua. He maungārongo ki te whenua. He whakaaro pai ki ngā tāngata katoa.

Firstly, I'd like to thank all the people from our community that took part in an interview and generously shared their time, perspectives and personal experiences. I was reminded throughout the interview process of the incredible wisdom and insights that exist locally and the incredible value of community consultation. Much of this report consists of quotes as I found it better to get out of the way and leave people's comments to speak for themselves rather than try and summarise their thoughts in my words.

I'd like to thank the Kellogg co-ordinators Scott Champion, Chris Parsons, Lisa Rogers, Desley Tucker and Patrick Aldwell for putting together a fantastic program which challenged our assumptions and stimulated our thinking. I also want to acknowledge the different speakers and industry leaders who presented to our cohort and thank them for sharing their knowledge and experiences.

I also want to thank our Kellogg cohort for their positivity, support and the different ideas they brought to discussions. I appreciated being exposed to people from across the primary sectors and gaining insight into the challenges facing other industries which I was less familiar with such as horticulture, forestry and Maori agribusinesses. It was great to spend some time up in Northland and I look forward to seeing the contribution this cohort will make to the Northland region and the primary sector in the future. In my report I touch on the possibilities for diversification, many of my Kelloggs cohort have topics that build on this theme and investigate potential opportunities for landowners.

I'd like to thank everyone involved with Taumarunui Whakaarotahi Trust for their ongoing commitment and mahi towards creating a food system that benefits our local community. It has required a whole team to take the vision and turn it into action. Thank you particularly to Paddy Arahanga, Riana Brown, Ricky Cribb, Theresa Hall and Michael Arahanga who were committed from the start and continue to be so. Thank you also to the many others from our community who have supported us along the way. Thank you to Mary Wilson for her guidance and for emphasizing the importance of community-led development. I also want to acknowledge those who financially supported our Trust initiative; the Ministry of Social Development, Trust Waikato, Rabobank, DV Bryant, Heartland Community Fund, The Lines Company, Gallagher, Rural Communities Trust, Te Puni Kokiri, Lottery Community and COGS.

Finally thank you to my parents for their support and contribution on the farm which has enabled me to focus on my research project and contribute to our local community.

1) Introduction

The contradictory nature of New Zealand's food system has come under scrutiny in recent years as problems at home such as child poverty and poor health statistics have increasingly raised alarm bells (Hancock, 2021). While I believe that our primary sector deserves recognition for the contribution we make to New Zealand's economy and the high quality of our meat, dairy and horticulture products I think that we also have a responsibility to explore how we can better deliver for our fellow New Zealanders.

Some may wonder why the primary sector should concern themselves with food insecurity when we are negotiating a raft of regulatory change and there are already a plethora of social organisations and several Government departments trying to address this issue. I'd suggest that as food producers we have resources and knowledge that would help develop long-term solutions to food insecurity therefore resulting in healthier communities.

When I look at the visions of our industry bodies I believe food security needs to be a priority if we are to truly live up to our visions. Horticulture NZ wants "healthy food for all, forever", Beef & Lamb wants to see "thriving rural communities valued by New Zealanders" and Dairy NZ desires that "New Zealanders have pride and trust in dairy farmers". New Zealanders will not care that we have fenced our rivers and planted our gullies if they struggle to access food.

I also believe that food security will become increasingly important in trade negotiations. It was a topic of discussion at inter-government level recently at APEC 2021. I believe it is both a risk and an opportunity for our trading agreements. While New Zealand struggles with poor health statistics so do some of our major trading partners (U.S., U.K.). If New Zealand can improve the health of our own population through our food products then that would be a great advertisement for our food producers and products both at home and abroad.

Covid-19 has highlighted the importance of food production and internationally our food products have been trusted and in demand. But Covid-19 has also highlighted the fragility of our food system, the inequalities in our society and the need for our communities to become more self-sufficient. When I asked interviewees what were the main factors contributing to food insecurity the following answer stood out and also captured some of the themes raised by others:

"Low income, ignorance, dependance on processed food presented by someone else. Government assistance not being matched with an expectation that people improve their position. Chucking food at the problem and not encouraging or expecting people to help themselves." – Farmer 3

I challenge the primary sector, government and others involved in addressing food insecurity to consider how we can move from food provision towards food sovereignty. Covid-19 saw a massive surge in demand on our foodbanks and fortunately generosity rose to help our social services meet that demand in a time of crisis. But if we are to learn from Covid-19 then we need to not just meet immediate needs, but also address the underlying issues that have caused those needs to arise. We need to ask ourselves why we are resorting to food-aid when we live in a nation that is so blessed with a temperate climate and fertile soils.

Taumarunui Whakaarotahi Trust take the position that poverty is a community problem and it requires a community solution. I have focused this report upon local food systems as I believe that it is at the local level that the underlying causes of poverty can best be addressed and changes made that will positively benefit our communities well into the future.

2) Aim

My aim in conducting this research was to provoke thought regarding our food system and discuss how we could address food insecurity as a community. As I conducted interviews, I realized just how much people from a broad range of backgrounds had to contribute to this discussion.

I have therefore written this research report with a broad audience in mind as I believe that developing a food system that benefits community will require the efforts and collaboration of multiple agencies- local Councils, DHBs, Social Services, the Primary Sector, Business and Government.

I have included a case study on Taumarunui Whakaarotahi Trust because I wanted this report to not only be thought provoking but also practical. Taumarunui is typical of many small rural towns in New Zealand in that it is isolated, has experienced ongoing depopulation and a loss of services. The case study outlines the principles we have applied in seeking to bring a unique rural solution to address local food insecurity. My hope is that others will be inspired to look at what solutions they can bring in their communities.

Objectives

To develop a more integrated food system that benefits everyone in community

To outline opportunities for the primary sector to have greater involvement in discussions around food security and have input into creating a better food system

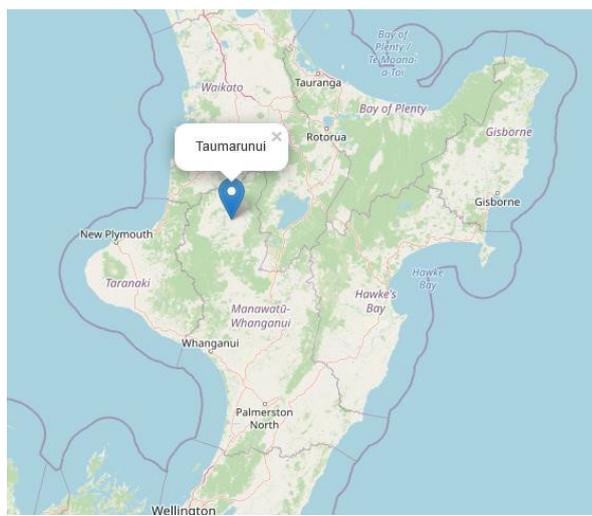
To provide information that is of practical value to the primary industry, DHB's, Councils and Government

To promote the potential of rural New Zealand to bring local solutions to 'wicked' problems

3) Methodology:

My methodology involved a literature review, semi structured interviews, thematic analysis, and a case study. In constructing my methodology, I took inspiration from the approach taken in the KPMG Agribusiness Agenda 2020 which focused on diverse perspectives.

“This report provides diverse voices about what our new, resilient future could look like and what we need to do to move towards it.”



I began my research by conducting a literature review which mainly focused on food insecurity within New Zealand. I then focused my interviews in the Taumarunui area to bring a rural small-town perspective.

I conducted 45 semi-structured interviews with people of different ages and from across different parts of our local community to get a broad range of perspectives. 42% of interview respondents were Maori which resembles the demographics of our community. Iwi affiliations included Ngati

Haua, Maniapoto, Tu Wharetoa, Tu Hoe, Nga Puhī, Kahungunu, Te Atihaunui-a-Paparangi.

I categorised these interviewees into the following groups: farmers, education, health, local government, government (MSD, DOC), social services (Kokiri, REAP, Maori Wardens, Foodbank), iwi, youth, business, and beneficiaries. I created categories as I wanted to see if there were differing perspectives between the different groups of people. Some people didn't fit into these categories or preferred to be classed generally as 'community'.

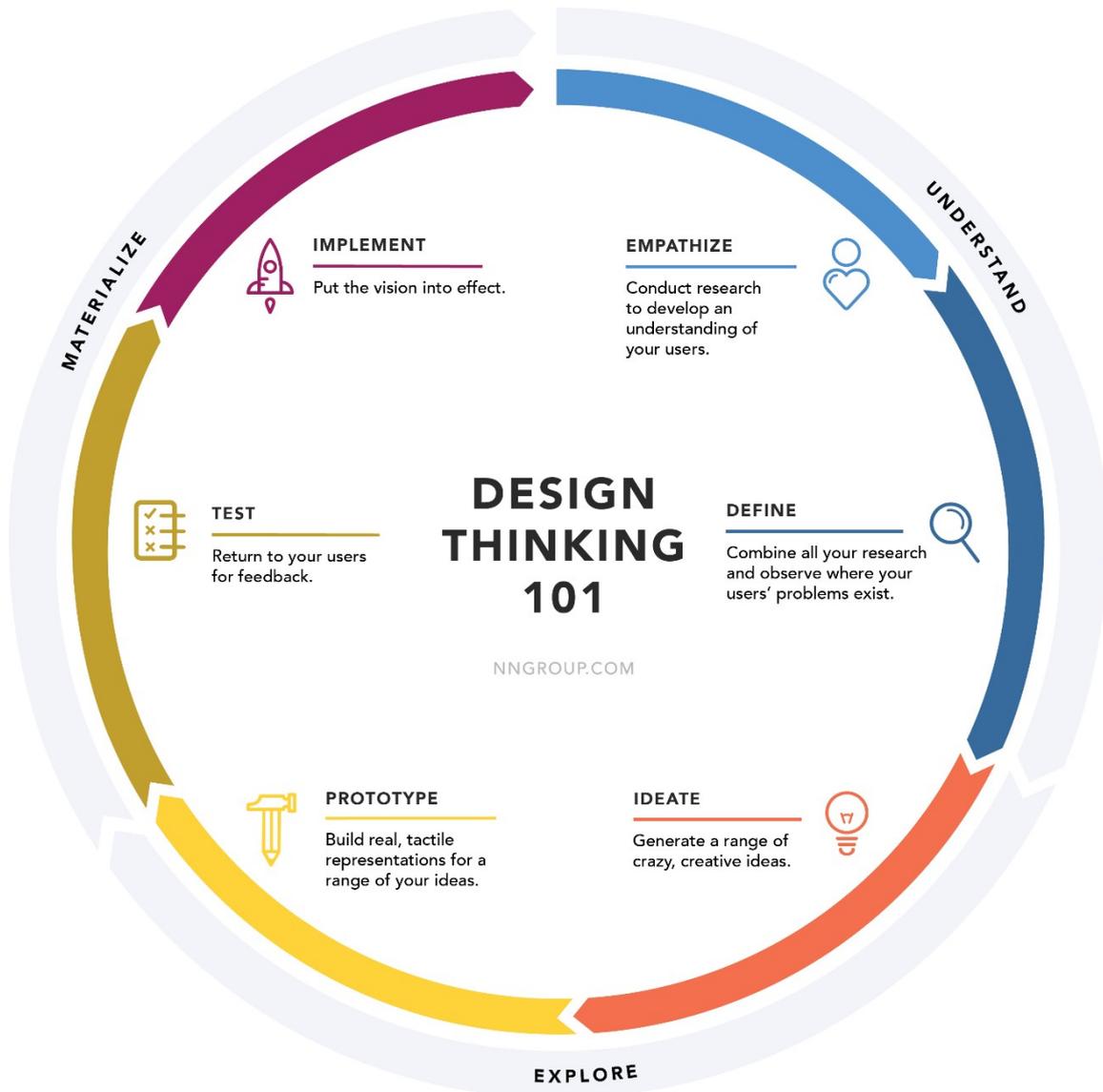
The interviews covered 3 broad topics – community, food systems and transition into work. The vast majority of interviews were conducted face to face and these ranged between 20 minutes to 2 hours long. The specific interview questions are attached in Appendix A. The interviews were conducted confidentially to enable people to speak freely. This allowed the interviewees to speak from their own personal experiences and not have to worry about being “on message” or representing any organisation.

As I conducted a thematic analysis, I found several core themes that cut across the different groups. A further breakdown of the main themes is attached in Appendix B.

I also constructed my research project around the design systems thinking model. The literature review and local interviews were part of the empathise stage. I then defined the results through thematic analysis of the interviews. The Ideate phase includes various solutions that popped out from interviews. I present a prototype model with Taumarunui Whakaarotahi Trust. The testing and implementation phase will continue on after Kelloggs as we seek to apply the ideas and insights gathered through this research project.

I like the circular model below as when I started this research project our Trust was already in the implementation stage and it felt backward to go out and consult with community when we were already implementing the vision. However, the benefits of doing so were enormous, it confirmed our instincts, enlarged our vision, identified opportunities to collaborate, and opened up new ideas and solutions.

Figure 1: Design Systems Thinking Model



Source: Gibbons (July 31, 2016). *Design thinking 101*. Nelson Norman Group.

4) The Problem -Food Insecurity in New Zealand

The problem for our food system lies in the dilemma that New Zealand produces enough food to feed 40 million people and yet within our own nation people are struggling to put food on the table. Over the last few years this had led to increasing calls to place more emphasis on looking after our own citizens and to focus on feeding the 5 million first (Hancock, 2021).

“Having a plan to adequately feed all five million kiwis before the first tonne is exported should be a goal for the industry.” -Ian Proudfoot (2019)

In order to get a deeper understanding of the problem I conducted a review of the literature relating to food insecurity. The Ministry of Health (2019) defines food insecurity as a limited or uncertain availability of nutritionally adequate and safe foods or limited ability to acquire personally acceptable foods that meet cultural needs in a socially acceptable way.

Prevalence

The number of people in New Zealand being impacted by food insecurity is of concern. In 2015/16, around 19% of children under-15 years in New Zealand lived in households that experienced moderate to severe food insecurity, representing between 161,000 and 188,000 children. (Duncanson et al., 2018).

Studies have found that a higher rate of food insecurity is associated with the following factors: sole parenthood, unmarried status, younger age groups, Māori and Pacific ethnicity, worse self-rated health status, renting, being unemployed and lower socioeconomic status. Income was the strongest predictor of food insecurity. (Carter et al, 2010).

Demand on foodbanks has been increasing over time. The Auckland City Mission saw the demand for food parcels increase from 5329 to 34120 between 2008/2009 and 2019/2020. Covid19 generated an almost 30% increase in demand for food parcels between the 2018/2019 financial year and 2019/2020. (Child Poverty Action Group, 2020)

Auckland City Mission Food Parcel Demand (2008-2020)

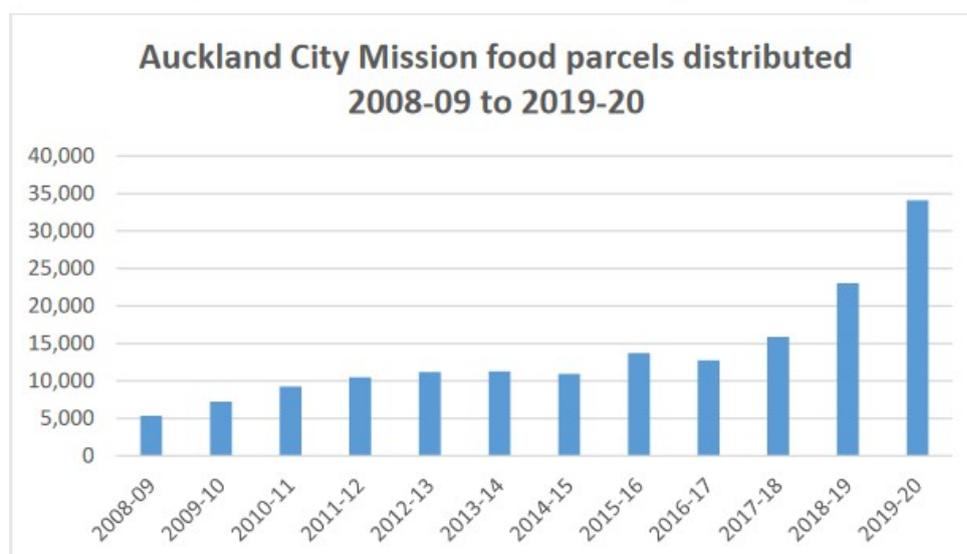


Figure 2: Auckland City Mission Food Parcel Demand. *Source: CPAG (2020)*

A recent report by the Child Poverty Action Group highlighted the worsened situation since Covid-19 stating, “Financial distress and food insecurity remained at elevated levels for the entire year to March 2021 compared to previous years, indicated by foodbank use, government supplementary assistance and hardship assistance, and the number of children in benefit-receiving households”. - CPAG: First year of Covid-19 (July 2021) These combined factors show that the prevalence of food insecurity has been increasing and appears to have dramatically risen with the impact of Covid-19.

5) The Impact of Food Insecurity

Food insecurity is associated with diabetes, iron deficiency, micronutrient deficiencies, multiple chronic conditions, poor self-rated physical and mental health, high stress and anxiety levels (Parnell et al., 2001; Bowers et al., 2009; Carter et al., 2010; T Moeke-Pickering et al., 2015).

But the impacts of food insecurity reach beyond health and also have adverse effects on learning, emotions and social skills. New Zealand-based research found that adolescents living with food insecurity are more likely to be overweight, have poorer diets overall, get lower grades in school, and are more likely to be suspended (Utter et al., 2017). The following graphic from the New Zealand Health Survey: Summary of findings summarises the wide-ranging impacts on children (MoH, 2019).

Of the children in food-insecure households

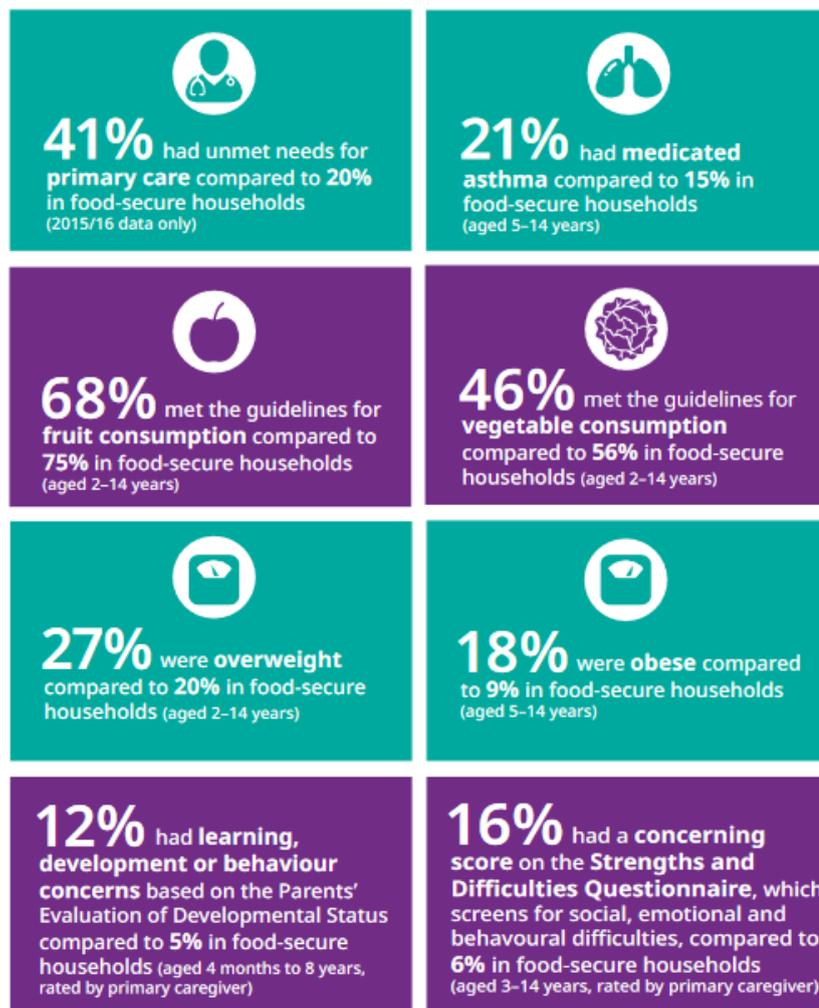


Figure 3³ Household Food Insecurity Among Children: New Zealand Health Survey: Summary of findings

Some studies have looked at the socio-cultural impact of food insecurity and found that food insecurity can undermine family and community networks, the ability of communities to build resilience to adversity, and result in families and individuals becoming more isolated (Graham, 2017). For example, around a third of Maori women (32.6%), often or sometimes, feel stressed because they do not have enough money for food and they cannot provide the food they want for social occasions (Beavis et al, 2019)

Beavis et al (2019) also highlighted how food insecurity as a child could have longer term impacts even once a household became food secure with satiety being prioritised over healthy eating, less intake of fresh fruit and vegetables and a lack of knowledge regarding how to cook vegetables. These habits were difficult to change even when food security was restored.

5.1) Opportunities for the Primary Sector

These wide-ranging impacts are not just a major concern but also a massive opportunity for the primary sector as it shows the potential to make a massive positive difference in our communities. The potential to improve physical and mental health, learning, behaviour and social connectedness.

The available evidence on the diets in low-income households indicates that they are low in vegetables, fruits, lean red meat and dairy products, but tend to be too high in fat, salt and sugar. The evidence suggests that this imbalance is not due to ignorance; that is, low-income households are aware that they are not eating healthy foods (Ministry of Health, 2003). This highlights the opportunity for our primary sector to help provide low-income households with the nutritional foods they are currently lacking.

A study of the New Zealand nutrition survey by Russell *et al.* (1999) discovered that for women experiencing food insecurity the probability of inadequate intake of 8 nutrients was unacceptably high: in the case of vitamin A, riboflavin, vitamin C and zinc, at least ten-fold higher than for a comparable group representative of the NZ population of women. Red meat is an excellent source of iron, riboflavin and zinc (Williams, 2007). Dairy products are high in Vitamin A, riboflavin and zinc and fruit and vegetables are good sources of Vitamins A, C and zinc (U.S. Department of Agriculture, (n.d.). www.myplate.gov/eat-healthy).

There is the opportunity for the primary industries to connect with Kore Hiakai zero hunger collective which brings together community, producers, retailers, philanthropy, and government to build collaborative, long-term, sustainable, and mana-enhancing solutions to food inequality in Aotearoa. Graham et al (2019) highlighted the possibility to also provide economic stimulus to regions as increasing fresh produce consumption would support local food growers, with the potential for regions to develop regional food provision and cuisine.

As I reviewed literature relating to food insecurity in New Zealand, I noted that there appeared to be a lack of research into food insecurity in a rural context. I sought through the local interview stage to address that gap in the knowledge by bringing a rural perspective.

“A lot of things work well in the city but don’t in rural, scattered population areas. Government imposed standards and regulations are too hard for rural communities to meet.” -Farmer 2

6) Local Perspectives on the Food System

The concerns raised about our food system by participants in local interviews echoed the concerns regularly raised in the literature. Locals raised concerns about the cost, lack of co-ordination, lack of thought, and inequalities in our food system. There was a high level of awareness and concern right across community regarding the issue of food insecurity which highlights the importance of consulting with a wide range of people when looking at potential solutions to food insecurity.

Figure 4: Interview Answers Q) How well does the food system deliver for New Zealand?

“I guess it has become so centralized and I think that’s crazy considering the landscape of our country and particularly with the landscape of our district.” -Local Govt 4

“The food system does an excellent job overseas but it’s failing us in NZ. The country is as strong as its weakest member and if they can’t afford healthy food, it will cripple us. Then you’ve got the housing encroaching on good horticulture land and the push to have non-food producing pine trees on farming land.” -Community 3

“As a country we over produce, we produce more than we need. We kind of lost our way as we ended up paying the same premium market as everyone else. The stuff we export is unfair on prices. In terms of NZ we are a logistical nightmare like Kumara coming out of Dargaville goes to a distribution centre, it all goes to one place and then onto stores.” – Business 3

Personally, I think its poor in the sense that there is little understanding of what is healthy and what isn’t. This needs to be taught to people. Young people don’t have much idea about vegetables and healthy food, and they are not aware of unhealthy food, particularly sugar. It is worse for Maori population than Pakeha. Fatty and sweet food is prevalent. - Health 1

“People can’t afford the food they should be feeding their children. It is so expensive compared to the UK to buy fish, meat, fruit and vegetables. We are meant to do 5+ a day but you can’t afford it. The low socio-economic people can’t afford it and even fruit is so expensive.” -Education 3

“For our country it’s alright and we are going to be alright for many years, we’ve got plenty of food but it’s not affordable because we are selling it overseas and then buying in food from overseas which is a stupid way to do it.” -Farmer 5

The export price is pricing meat out of the market for locals in New Zealand. I think the food system is failing us. Only the elite can afford to eat meat that has not been contaminated with sprays & drench. It’s the same with vegetables and organics. All that push to plant pine trees for carbon is nonsense -it is taking out our farmland. – Iwi 1

What was broadly evident from the interviews was that there was a general dissatisfaction with our current food system and a belief that it is failing people within our community. A common theme was the cost of healthy food and the widespread prevalence of unhealthy food. Many raised concerns about how health was being impacted by poor quality food. New Zealand has the third highest rate of overweight and obesity for adults and children within OECD countries. Dietary risk factors, including high body mass index, are by far the biggest contributor of health loss in New Zealand (18.6%) ahead of smoking as the next largest contributor (9.1%) (Vandevijvere et al, 2018).

“It would take 20 years to see the full benefit of healthy food. DHBs are trying to deal with what is in front of them (waiting lists etc). People always think about access to health rather than health. DHBs are well versed in the social determinants of health but how to address nutrition is difficult because there is so much going on. The DHB focus is more central - on Hamilton”. – Health 1

The diverse group of people interviewed meant that there was also a broad range of issues highlighted as different people focused on different aspects of the food system. Some raised concerns about food wastage, others the control of commercial interests, some discussed environmental factors, others spoke of the impact of Government regulations. A UN brief assessing the state of food security and nutrition in 2021 suggested that Interventions right along food supply chains are needed to increase the availability of safe and nutritious foods and lower their cost, primarily as a means to increase the affordability of healthy diets. They state that “this calls for a coherent set of policies, investments and legislation from production to consumption aimed at realizing efficiency gains and cutting food losses and waste to help achieve these objectives” (FAO et al, 2021)

“Less people farming drives up the price of meat as more land goes into forestry. People are missing out on the satisfaction of planting your own food, harvesting it and eating it.” -Iwi 1

Interviewees also commented on how there seemed to be a lack of thought regarding ensuring food production is protected and that people have access to food. One of the issues consistently raised in the literature is the lack of a national food strategy. Several authors raised the point that this lack of direction leads to an uncoordinated, ad hoc approach and the burden for addressing food insecurity often falls upon charitable organisations (Graham et al 2019), (Cooper & Kennerley, 2019), (Huang et al, 2020). Several articles called for the need for the state to intervene and assume greater responsibility in addressing food insecurity (Graham et al, 2019), (Robinson, 2019).

The Governmental response to food insecurity is confusing with a range of programs run by different departments; the Ministry of Health runs various nutritional initiatives such as Healthy Families New Zealand, the Ministry of Education co-ordinates Lunches in Schools, Ministry of Social Development provides support through WINZ, Ministry for the Environment focuses on food waste reduction and the Ministry for Primary Industries oversees food production and food safety. Huang et al, 2020 found minimal inter-ministry coordination on food insecurity as a nested problem. They discovered that ministries have specific and separate focuses and agendas, which impede efforts to address food insecurity in a unified way.

Both local interviews and the literature review revealed that there are major issues with our current food system hence the need for some serious consideration as to how we can transform the food system so that it benefits everyone in community. We will start the search for solutions by looking at the personal stories of local people who have experienced food insecurity.

6.1) Personal Experiences of Food Insecurity

In an academic symposium hosted by Kore Hiakai on 8th July 2021 Dr Sarah Gerritson raised the point that people move in and out of food insecurity throughout their life and that food insecurity is likely to be a lot more prevalent than what our surveys pick up as they are just a short snapshot in time. In my interviews I was surprised at the number of people who had personally experienced food security at some point in their lives. The following are some of the comments local people made about the experience. (I have removed any identifiers to protect their confidentiality).

“For quite some time I was a solo Mother. It was very difficult emotionally, my marriage broken as well as my finances. I’d gone from marriage to solo parent. At WINZ I felt mismanaged, insecure having to provide all the paperwork and details -it compounds on the heart.”

“I came from a family of 6 and food wasn’t readily available and Mum used to make food. Then flattening I was too proud to ask my parents for food so I lived on 2 minute noodles and tuna.”

“I’ve been on a benefit before and felt the sting of spending 75% of whatever you have left after rent on food. WINZ was my help. I didn’t even think of foodbank. You were always conscious with WINZ that you had to pay it back and you’d only get it once a year. It’s a pretty degrading process to go through.”

“I didn’t even ask for help, it was when I was at University and it was first year and I was really unwell but I couldn’t afford to eat better. I just wasn’t thinking laterally and just struggled through it and rode it out. At the time I didn’t think of checking out if there was a local community garden I think I was just focused on surviving and that was a bit of tunnel vision.”

“I was on a sickness benefit and needed food grants. I went to WINZ for help. That WINZ system is wrong, having experienced it I believe that a box of food would be better rather than money for food.”

Other studies echo these same concerns about the distressing and degrading experience of accessing assistance through WINZ. Graham et al (2019) states that people in need would choose to go without food rather than seek assistance from WINZ to protect their psychological well-being and sense of self. Much of the literature raises questions about the suitability of relying on charities and foodbanks to address food insecurity when people find that way of receiving food stigmatising. Bowers et al (2009) highlights the point that if the definition of food security includes that food be obtained in socially acceptable ways then we really need to look at addressing the underlying causes of food insecurity rather than provide band-aid solutions like foodbanks which people find disempowering and which absolve governments of their responsibility to address food insecurity.

“Currently, New Zealand has no food security policy, and food relief for New Zealand households is unreliable. Charity-provided foodstuffs are not always adequate, edible, or suitable for the intended recipients”. – Graham et al (2019)

Value of Whanau, Community Networks and Trading

In my interviews I also spoke with people who had experienced food insecurity but who had found other ways to address their need such as hunting, networking and trading. There was a difference in how these people spoke about that experience. There was a sense of pride in how they were able to get through, an appreciation for the skills they learnt and the connections they formed with others.

“There is more support now than in the past. I had young children and was living week to week and it was tough, but my husband grew veges and we had pigs and we networked with farmers and were able to access meat. We got help from our networks. We’d pick walnuts and hazelnuts and they’d return with meat. That was the joy of a small community you are able to network with.”

“When I was a beneficiary to buy a loaf of bread was a huge thing. My grandparents were on a pension and my Mum was working a little bit so we would share and have a Sunday lunch together. We worked out how a meal would look like as a family.”

“We went to farmers and bartered and worked for meat and we poached to get meat to feed the family. We’ve had access to be able to feed the whanau, we have hunted and fished and we know where to go at certain times of the year to get certain foods and we have our own kai garden. For those things we can’t grow and gather other whanau have dropped off food eg milo and milk. I’ve never been to a foodbank.”

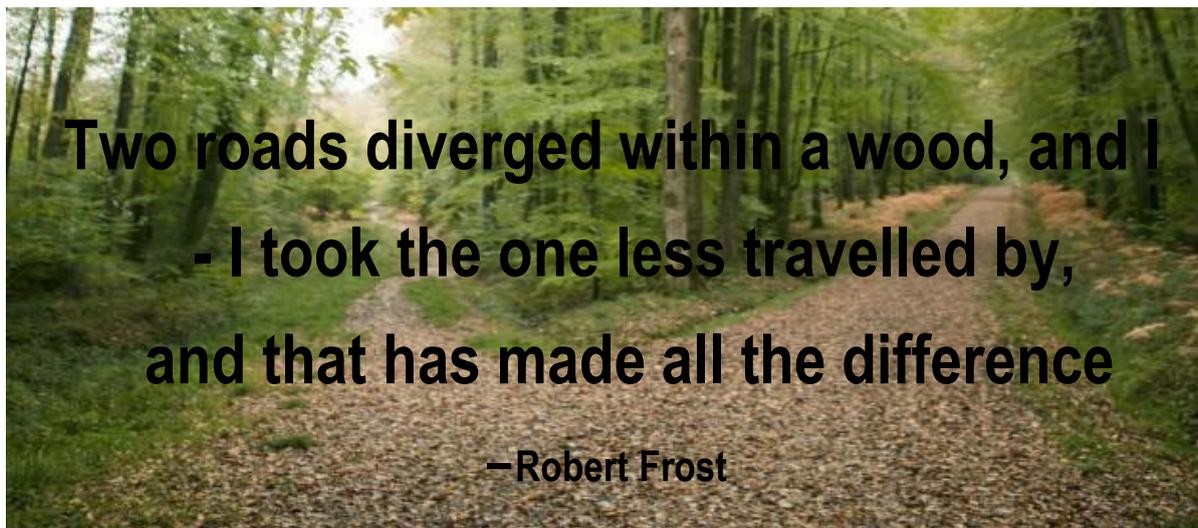
“I was young and spent wages on piss and partying and it’s all fun and games until you’re hungry. I just went to the boat when I needed food because I was a fisherman at that time.”

“I was studying part time and the Wananga used to have shared lunches. My partners employer would give us a voucher sometimes for the RSA and in duck season they would provide duck.”

These experiences highlight the importance of informal networks and non-institutionalized methods of addressing food insecurity. These people were able to maintain their mana through meeting their needs by the more traditional methods of food gathering, hunting, fishing and trading. Other studies have also noted the importance for Maori of sharing of food within extended whanau and how this has enabled whanau to reduce the severity of food insecurity. This relates to the Maori values of manaakitanga (support/hospitality) and emphasises the importance placed on whanaungatanga (Beavis et al, 2019). Activities such as gardening, hunting and gathering food are a way of passing on traditional knowledge and practices as well as connecting with the land and food systems. Sharing intergenerational knowledge and skills relevant to health and wellbeing is a preventative measure that will enhance good health practices (Beavis et al, 2019).

Kore Hiakai Zero Hunger Collective encourages social organisations to aim to create mana enhancing models of addressing food insecurity. In their Mana to Mana guide they discuss how foodbanks were never intended to be a long-term solution to poverty but were meant for unexpected times of crisis. However, when food parcels are needed repeatedly over time, they are no longer a short-term intervention and have the danger of creating a cycle of dependency. The drivers of this cycle of dependency are poverty, that is inadequate income and high costs of living, particularly housing and the cost of basic food (Kore Hiakai, March 2021). Kore Hiakai longs for an Aotearoa where there is food security and food sovereignty.

7) Food Sovereignty and Food Security



Food Sovereignty

The right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems (Nyeleni, 2007).

Food Security

Food security is the assured access to sufficient food that is nutritious, of good quality, safe, meets cultural needs, and has been acquired in socially acceptable ways (Russell et al., 1999).

Food sovereignty movements emphasise that unlike food security, food sovereignty is about placing the control of food back into the local communities (US Food Sovereignty Alliance, 2021). It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations. (Nyéléni, 2007, para. 3)

"Its spiritually helpful being with the earth and working the ground, good for your overall wellbeing. Building relationships, connecting with land and seeing the fruits of your labour. There is more fulfillment about that sort of system." – Community 2

I encourage the primary sector to connect with Kore Hiakai and to explore ways our country can move towards food sovereignty as well as food security. When I spoke with interviewees about how our current food system differed from the past I was surprised at the changes that had occurred, how locally controlled the system used to be and how centralised and commercialized it had now become. It was evident that there was a greater degree of food sovereignty and food security in the past which provides lessons as to how we can improve our current food system.

Your ability to barter for a mutton like in the past is reduced. That was a way that people could improve their circumstances by bartering and trading for food." - Community 3

7.1) Lessons from the past:

Figure 5: Interview Answers Q) Does our current food system differ from when you grew up?

“I kind of feel like we always had kai growing up, it was around us all the time. My parents grew it and my grandparents grew it. It’s like that nostalgic picture where my grandparents were always baking. I think there was kind of a love for gathering kai. My Dad used to take us to the beach to get kaimoana. Maybe it’s just generational knowledge that has been lost or not passed down. Young families moving to cities for employment and losing that knack of gathering kai for your families.” -Social Services 3

“There was heaps of food around when I was a little girl. You were lazy if you didn’t have a kai garden to feed your family. Then again we haven’t got the land like we used to as we are in town now. That’s why it’s good to have communal gardens.” – Iwi 3

“I remember food being brought in bulk as it was cheaper for big families.” – Beneficiary 2

“It differs hugely from the past, the food system is now controlled by multi-nationals contrasted with the economic imperative of the Government in the 1950s-60s. Between 1937 and about 1975 national self-sufficiency and national economic self-sufficiency were Government policy. – Community 5

“Basically when I grew up everybody had a vege garden even in the cities. We even had our own milk had our own cow and our own meat. There was also a lot more homemade then now, all our own preserves, biscuits, Mum even made spaghetti. There is less home baking now. AMP shows used to have competitions for best cake and veges and pickles. Now you go to the café at the AMP show and get a pie.” -Business 2

“Locally we had a post office, freezing works, railways, King Country milk (dairy factory) that was locally owned and produced town milk. There were 7 dairy suppliers for the area (Taumarunui, Raetihi, Ohakune). This got bulldozed out by Fonterra, they wouldn’t renew the contract with the supermarket. It was a functional system.” -Local Govt 3

“I grew up in a village of 500 people and families worked at the Ministry of Works, on farms, and there were about 30 commercial fisherman all with their own boat. Each boat ramp used to have 2-3 boats. The fisherman sold to the local fish n chips shops. Then when they all had to get quota these self employed fisherman got brought out by the big companies like SeaLord. Now those self employed fisherman are all gone and it’s just big industry.” -Farmer 2

7.2) Centralisation vs Localism

These insights from the past show how much more resilient our food system was due to it being more localised and more people were involved in growing, cooking and gathering their own food. The arrival of supermarkets provided the convenience of buying from one store but that has led to a fragility within the system and a dependence on a couple of big commercial outlets.

“If you look at who owns the food system about 6 companies control 80% of the food and they have a big say in the price.” -Business 3

The recent commerce commission report highlighted how our supermarket duopoly system is not performing well either for consumers or for producers. There is a lack of competition meaning that consumers are paying relatively high prices for food compared to overseas. The system is not working well for suppliers either as many are reliant on the two main grocery retailers. While Foodstuffs and Woolworths have persistently high profits, they have been passing increasing costs, risks and uncertainty onto their suppliers (Commerce Commission New Zealand, 2021).

“We’ve centralized all food including growers and it all goes to distribution centres and then supermarkets. Shutting down small food industries and centralizing and trucking it through distribution centres doesn’t make sense. I was a produce buyer for a supermarket, and we got pressured to drop local suppliers and take on group produce suppliers. When you stop buying from local growers that’s half a million dollars gone from the local community.” -Community 1

A couple of interviewees commented on how Covid had highlighted the fragilities within our food system and how vulnerable our community would be in the advent of a disaster or crisis due to our dependence on bringing in food from outside the district.

“That fact it is not locally grown and is dispersed means we are at the whim of transport and lockdown was a good example of what happens when you don’t have it growing in your back yards. Ironically, I had written on facebook beforehand what would you do if supermarkets closed tomorrow not expecting it would happen” – Local Govt 4

“The lockdown period also presented additional challenges to low-income individuals and families, many of whom were already struggling to meet essential living costs prior to COVID-19. Low-income individuals and families were adversely affected by movement restrictions reducing access to lower cost food sources (e.g. friends and family, school and community food providers) and bulk purchases of food due to fears of supply chain disruptions increasing food costs” - (Frischknecht, 2020).

If we are to develop a food system that benefits everyone in community then we need to have a good understanding of the desires and makeup of our community. Maori make up 50% of the population in Taumarunui and are disproportionately impacted by food insecurity so there needs to be significant Maori input and values underpinning the development of that system. Food security is about more than physical health for Maori as kai is also integral to several cultural concepts and practices such as mana (*authority*), manaakitanga (*reciprocity of kindness, respect and humanity*) and mahinga kai (*traditional food gathering places and practices*) (McKerchar et al, 2015). The sharing of food with whanau and wider community networks is a way that Maori express manaaki and seek to enhance mana. As the sharing of food is closely linked with whanaungatanga we will now move to looking at community and perspectives on what makes a thriving community.

8) What Makes a Thriving Community?

Figure 6: Interview Answers Q) How would you describe a thriving community?

“To me a thriving community is a community that is self-sufficient, and all of their basic needs are within a 40-50 mile radius food, shelter, clothing are sourced locally from the community. Where all basic needs are available to the community provided by the community.” – Community 2

“Things like this (Whanganui hunt & kai festival), everyone getting together” – Youth 1

“I think it is when things are going well, when businesses are doing well but also community groups, people working together and the town has the resources to provide the community with what is needed.” -Business 1

“Incomes are important, people having enough money to get what they need. Jobs and good social connections between the whole community and between different groups of community.”-Farmer 4

I think a thriving community is a happy community where people feel safe. I think of our kids and for us it's about us working together with whanau and anyone else close to our tamariki. Relationships are key to a thriving community.” – Education 4

“Where everyone works together as one” – Beneficiary 1

“Community all together, no-one excluded, no-one left out, all are one loving community.” – Social Services 3

“A community that joins together in all aspects of life eg education, activities, promoting and caring to enjoy their life” – Iwi 2

“Confident youth, safe, healthy, active, interesting and diverse” – Local Govt 2

Connection, unity and togetherness were commonly mentioned as being central to a thriving community. People also spoke about the need for good access to resources, services, jobs, health and education. An article by Cavaye (2001) on community development also highlights the importance of community connectedness. “It is through action, participation and contact that the community becomes more vital, more able to manage change with stronger networks, organisational ability, skills, leadership and passion.”

When I asked people about what was holding our community back disconnection and a lack of collaboration were common themes. People also spoke about how depopulation and the removal of services had caused enormous damage to our community.

8.1) Factors limiting community

Figure 7: Interviewees discuss factors limiting community and how it has changed from the past

“There is a lack of central Government intention to deal with rural depopulation it’s not even on their radar.” – Community 5

“Today you won’t go ask your neighbours if you need something, you go to trademe or technology instead. We don’t think we are wealthy but we are wealthier, farmers used to share tractors and bulldozers. It appears we don’t need each other so much now because of material wealth but we actually do.”- Business 2

“To be honest growing up was way cooler, It felt like everyone was more open to collaborate and there was no question of who had roles people just done it and worked together. Compared to now I feel there is kind of like this precious thing, of possession or something. We work in silos, we work alone, we’re not communicative. I don’t think we share a lot anymore.”- Education 6

We had the cheapest electricity in the country until the Bradfield electricity reforms, the railways were a huge employer, we had a thriving hospital which was used for training and was good for community. There were 2 meatworks Affco and a District Council owned abattoir to service safe, hygienic meat to the community. We’ve been dealt to by Government and it’s our community that has stopped things being as bad as they could be.” – Farmer 2

We live a long way from everyone else
-Youth 1

“A lot of people don’t really get to have a say. The people’s voices, people don’t think Council is listening to what we want.” – Social Services 3

“A lot less friendly people, in general not the same amount of Whanaungatanga. People don’t have as much time for each other, they aren’t making time for engagements like we used to.” – Govt 1

I think there are segments of the community that never mix and so they do not have any awareness of other parts of their community. So I think that has a big impact. I have definitely found that the people that have nothing give so much, they are very generous. And I’ve found the people that have a lot of resources don’t share it.” -Local Govt 4

A literature review by Stevenson (2011) found that all of the literature recommended collaboration as an important aspect in planning and implementing any initiatives that affect food security.

Like many other rural towns in New Zealand, Taumarunui has suffered from depopulation as people shifted into the cities which has led to a loss of industry, jobs and services. More recently there has been a reversal as people are returning home again and retirees have been attracted to the area by the comparatively cheap housing. There is an opportunity for rural regions to draw people back from the city with the increased use of technology like Zoom allowing people to work from anywhere. The rural-urban drift has placed strain on the land and infrastructure of our cities due to over-population and has left rural regions struggling to maintain infrastructure due to a lack of ratepayers. As one of the interviewees suggested the government should have a policy of repopulating rural areas as it would be a win-win situation taking pressure off our cities and would help revitalise our provinces. Some of the interviewees commented about the impacted that depopulation has had upon local leadership and challenge of people getting burnt out.

8.2 Leadership

Figure 8: Some interviewees discuss the importance of leadership within community

“I think you can divide community into 3 groups, you get the drivers and then a bigger group are the helpers and then an even bigger group are the beneficiaries of what goes on – when community comes down to a certain size there is not enough people in each group to make things happen”. – Business 2

“The hardest thing is they pull services from our community and we get delivered at -not with, and from afar. Our community doesn’t respond well to external people and services.” -Youth 3

“Taumarunui is completely different to what it was in the 1950s-60s. The common theme is the continual loss of potential leaders from Māori and working class to metropolitan areas which has compromised emergence of local community leadership.” – Community 5

Working for iwi I feel I have a responsibility to look out for young talent to nurture and grow a person from within the community, iwi and hapu. It irritates me when I see Council bring people from outside or employ people from within rather than look to the community to fill those positions. – Community 3

“I think in this area and a lot of areas there are a few individuals who are the drivers and movers and shakers and they can get a bit burnt out.” - local Govt 4

“Someone needs to drive it and take charge, while we have a lot of pockets of amazing stuff happening there is no one person that wraps it into one. Each little community does their own thing.” – Business 3

Leadership, collaboration and knowledge were also highlighted as important for passing on food education and self-sufficiency skills to future generations.

8.3) The Need for Food Skills:

When I asked people about the factors causing food insecurity a consistent theme that got raised was the lack of food knowledge and skills. This included a lack of understanding regarding food production, a lack of awareness of nutrition, a lack of knowledge of traditional kai gathering practices and a lack of cooking skills.

Figure 9: Interviewees discuss factors contributing to food insecurity in New Zealand

“Finances, budget constraints, lack of knowledge around what are good choices. Lack of education re cooking, preserving. I see a lack of awareness around nutrition. Some people are time poor so convenience food is chosen when it’s not the best quality choice for them. Definitely education around nutrition is lacking.” – Health 3

“There is a lack of understanding about where food comes from and nutrition.” -Farmer 2

“I don’t think Government prioritise the right things, production of good food and feeding of the nation isn’t even thought through properly.” -Education 5

“Growing up I was the one that would prep veges for tea, make a cake, but I’d had home economics and we cooked the school lunches and we budgeted on the menu and worked out how much we charged for the meals. We were also taught how to substitute foods so if we didn’t have an ingredient, we could use something similar.” -Govt 2

“In our community there is not a lot of intergenerational learning/ knowledge. In the past you had knowledge on how to cook for a family with 6 kids but now with smaller families that intergenerational learning is not happening. A lot of our clients don’t know how to cook or cook well.” - Social Services 1

“There is a loss of personal skills (hunting and gardening) to improve your circumstances. There is almost like a hopelessness and powerlessness that is contagious. We’ve always known poverty but there is a poverty of the spirit that is very strong that impacts far more than material poverty – Community 3

I believe that this presents an opportunity for the primary sector to bridge that gap, otherwise others may try to fill it who have little knowledge of food production. The increased interest in gardening provides the horticulture sector an opportunity to provide advice to community gardens and schools. I challenge the primary sector to consider how we can help our communities move towards food sovereignty. One way I believe the primary sector can contribute is through linking current food security initiatives like breakfast and lunches in schools with education around how that food is produced. This could involve collaboration with current initiatives like Kickstart breakfast advertising Open Farms or actively encouraging food producers to participate in the Inspiring the future Aotearoa program where people volunteer to speak about their career in primary schools.

9) Transition into Work:

I asked people about the qualities and skills needed to get into employment as helping people successfully transition into work is another way of addressing food insecurity. People overwhelmingly ranked character/ attitude as the most important quality and of greater importance than skills and education. Many respondents stated that if someone had the right attitude that they would be able to teach them skills and put them through training courses.

Q) What have you found to be the keys to successfully transitioning people into work?

Networking

“Knowing who they are and what they want and how to cash in on their strengths to get a foot in the door and not rushing into it. Strengthening networks with friends and agencies as it’s a small community and it’s not what you know it’s who you know and what people know about you. A lot of solo Mums only get a foot in the door because they have those networks and connectability within the community and room to move outside the box you live in. If you aren’t raised in a strong healthy family then it is really hard to make those networks. I think it’s about educating people who are privileged as well as supporting those who are under privileged.” – Govt 2

Being Part of a Team

“I have employed people from the benefit as I truly believe that everyone deserves a chance. Sometimes you see that little spark in someone and think they could make a difference. I’ve had them come in as a trainee employee with WINZ where part of the wage is paid but the only thing is there isn’t much support for the employer with that. I’ve found the key to successful transition from the benefit into work is to have the whole team supporting that person so that they feel they are part of the team. At times they have a terrible attitude and sometimes you know no matter what you do it is not going to make any difference whatsoever. It has been just word of mouth sometimes with people coming to us for jobs. We’ve had two from the High School that have done work experience with us and have then trained and come back to work for me”. – Education 3

Providing a Vision

“We look for attitude and motivation and willingness to work hard. We show them- Look what you can have if you stick at it. You can live rent free and earn \$70,000 a year in 5 years and clear your debts and buy a house in town. We give them a dream and a goal to motivate them. In the first year they pay off their debts and then they start wasting money a bit, so we get them back in the 2nd year for a meeting and speak to them about setting up things well for their kids and staying out of debt. A lot of them come with debt. What stops them getting a farm job is partly them motivating themselves and the other half is farmers attitude – stipulating that they must have education. Most of them just need a start and a lot of farmers don’t want to take that risk and don’t want to have that image of employing someone off the dole. I think Government needs to take some of the risk out of it for farmers to employ them by having WINZ pay the wage for the first few weeks. For some of the people we’ve employed earning good money and not having debt and saving money changes everything for them.” -Farmer 1

We will now move into a case study and look at how Taumarunui Whakaarotahi Trust is seeking to address local food insecurity by enhancing mana, building connections within community and helping transition people into work.

10) Taumarunui Whakaarotahi Trust

This case study is intended to link the academic discussion around how we develop a food system that benefits everyone in community with practical implementation. We will look at the aim, principles and systems of Taumarunui Whakaarotahi Trust and how they relate to themes raised by the community.

Aim:

To empower people and reduce poverty by working together as community to provide healthy nutrition and develop character.

The Concept:

Establishing a community garden where people turn up at a set time and assist with the garden & receive some garden produce. For those that make a regular commitment and contribution to the garden (eg 1hr 2X a week) they are rewarded each week with a meat koha donated by local farmers, hunters, businesses. This is intended to help encourage volunteerism and develop good work habits and character.

Build on Local Strengths

We looked at the unique strengths of our community and how we could utilize those strengths to address poverty locally. Local strengths include a good climate and rainfall, plentiful hunting and fishing, sheep & beef farming, people with self-sufficiency skills, rich gardening history, under-utilized infrastructure, and readily available land.

When we began looking for land to develop a community garden we noted an area of under-utilized Council land below Manunui hall. The hall had been used only 8 times in 2 years and the gutters of the hall roof were just draining water into the ground. With support from Ngati Hauhau we obtained a 5-year lease of the land and also formed an MOU with Council regarding regular use of the hall. A water tank was installed to capture runoff from the hall roof to irrigate the community garden below. We regularly use the hall for teaching food skills such as preserving and bread making and community building events like potluck dinners and a monthly market.



An Integrated Commercial/Social Model:

The long-term plan is to have the community garden running self-sufficiently with local customers and food businesses purchasing garden produce and helping finance the community gardens. Having a commercial aspect to the model helps to ensure the continuity of the project and make it resilient so it is not dependent upon outside funding. It also enables local food businesses to support locally grown produce, be part of addressing difficult social issues and help create a better community.

To understanding the thinking in behind this initiative we will break the aim down into segments and analyse how it relates to community feedback and how it is implemented.

Empower People and Reduce Poverty

“Naku te rourou, Nau te rourou, ka ora ai te iwi” – With your food basket, and my food basket, the people will thrive

This whakatauki sums up our approach to reducing food insecurity. Like a potluck dinner everybody contributes something, but the things they bring are different – volunteers give their time, farmers & businesses provide meat, some bring knowledge and others contribute finances. In this way contributions from across the wider community reduce local poverty by making nutritious food accessible to people who otherwise struggle to afford fresh vegetables and meat.

Our approach aims to enhance the mana of all, as everyone is able to contribute in some way. We also aim to enhance mana by helping people become more self-sufficient through learning how to grow, cook and preserve food. Our understanding of poverty is influenced by Mason Durie’s Te Whare Tapa Wha model and so we aim to reduce all aspects of poverty – physical (Taha Tinana), spiritual (Taha Wairua), mental (Taha Hinengaro), and lack of whanau (Taha Whanau). The following comment stood out to me as it highlights the link between a lack of self-sufficiency and a poverty of spirit.

“There is a loss of personal skills (hunting and gardening) to improve your circumstances. There is almost like a hopelessness and powerlessness that is contagious... We’ve always known poverty but there is a poverty of the spirit that is very strong that impacts far more than material poverty”. -Community 3

Working Together as Community (Whakaarotahi)

A local kaumatua Isabel Roderick defined ‘Whakaarotahi’ as to think, act and move as one. Therefore a central concept of our Trust is one of unity and a desire to see the town unified in mind, spirit and action to reduce poverty. We hold the view that poverty is a community problem and therefore it requires a community solution.



Our Trust are committed to helping people journey to a better place by upholding the following principles: Mana Atua, Mana Tangata, Mana ki te Hapori, and Mana Whenua. The photo shows a team collecting sheep manure from a local farm to fertilise the community garden. This is an example of how we can work as community and utilize our resources for the benefit of all. Most of our core volunteers are retirees or beneficiaries. This is a good mix as the retirees come from a generation who placed high value on hard physical work and have the time to mentor and upskill younger volunteers.

“Na, ano te pai, ano te ahua reka o te nohonga o nga teina, o nga tuakana i runga i te whakaaro kotahi” - Behold, how good and how pleasant it is for people to dwell together in unity!

Develop Character (Transition into work)

“Men become good builders as a result of building well and bad ones as a result of building badly. Otherwise, there would be no need of anyone to teach them: they would all be born good or bad. Now this holds good also of the virtues. It is the way we behave in dealings with other people that makes us just or unjust, and the way that we behave in the face of danger, accustoming ourselves to be timid or confident, that makes us brave or cowardly...So it is a matter of no little importance what sort of habits we form from the earliest age- it makes a vast difference, or rather all the difference in the world.” – Aristotle

Considering the importance of habits in developing character we designed the meat koha system to encourage consistency and regular commitment, which are traits necessary for people to successfully transition into work. We made the time frame short (1hr) so anyone can participate but regular so that new habits can be formed. We also wanted to have consistency of volunteering so that people get regularly exposed to positive role models and connected to wider community networks.



The koha system was also designed to try and broaden the group of volunteers and involve a wider section of community so as to avoid the common issue of a few people driving an initiative getting burnt out.

We partnered with Land Based Training (LBT) who have been conducting the practical component of their horticulture course at the community garden. This has led to a greater influx of volunteers as several students wanted to continue an involvement with the garden after their course had finished. (Photo of LBT

horticulture students in the greenhouse)

Just as the dairy industry has clear stages whereby people can progress into farm ownership, we are looking to provide stages where people can have increasing involvement in the community garden as we look to transition it up to a market garden operation. For those wanting a greater level of involvement we are considering setting up a commission type scheme whereby they can get a % of the income from produce sold. In this way they would learn entrepreneurial business skills, but the Trust has taken out the risk by having done the ‘capital raising’ and paying for expenses. With the increase interest in gardening and the need for horticulture staff I see an opportunity for the horticulture sector to partner with community and marae-based gardens and provide advice.

While this case study shows how local community can work together to address food insecurity there are some issues which cannot be addressed at a local level. The current food safety regulations around homekill meat mean that local hunters and recreational fishers cannot gift their game or catch towards our meat koha system. The impact of this is that it reduces the number of people within our community who are able to contribute towards our Trust and places a greater burden on farmers. It also reduces the variety of meat and means that we cannot utilize the abundant supply of deer, pigs, trout and eels within our area to assist local people suffering from food insecurity. The impact of regulation upon food access and the barrier it created to cottage industry was also a theme commonly raised in my interviews

11) Regulations Impacting Access

Figure 10: Interviewees discuss the regulatory barriers in our current food system

“Before, people could make a cake and relish but now you need a commercial kitchen and I think there is a lot of regulatory red tape that prevents food sovereignty. Crop swap in Raetihi works really well but is on a small scale. When people are trying to do things from a trading perspective rather than with money if you have to pay for things like a hall it adds another complication.” -Local Govt 4

“A small cheese maker has to pay the same licensing costs as Fonterra pays. It’s the same in the building industry with Carter Holt Harvey having too much control, small communities can’t build houses because of the cost of scaffolding – the rules suit big business. For small scale meat producers to set up an abattoir on their property it costs over \$100,000 to setup. People can’t afford to do it because of all the licensing costs.” -Community 1

“Definitely food safety has made things difficult even someone like a florist is a 12 week process. I’m trying to get a local honey supplier but it is a long process. For little guys it makes it harder as they have to have strong food safety plans it’s not as simple as it was back in the day.” -Business 3

“I think the Ministry of Education could contribute by refining the systems we’ve got to work better for our hungry kids. Maybe if we could take it over for our kids but it is so stringent. We have to have an industrial kitchen to cook a feed for our kids. Whereas at our old school we had a Mum come in to cook a feed 3 times a week for our kids. But they make it so hard. They need to ease up on the bureaucracy. They have focused so much on healthy that they have forgotten hungry and made it difficult for us.” -Education 1

Food is so expensive eg butter \$5.49 and we live in a dairy country. Also with meat farmers are now prohibited to sell direct to community.
-Iwi 2

In order to enable a local food system the regulatory environment needs to change. The highly stringent food safety regulations are a barrier to cottage industry due to expense and lack of practicality. The current regulatory climate strongly favours well-established big businesses who can absorb costs or pass them on to customers and producers. We need to provide a regulatory environment that enables start-ups, innovation and small businesses if we wish to see a thriving local food system and to stimulate regional economies. The other impact of the current regulatory environment is that it discourages self-sufficiency, networking and generosity.

“Rural communities used to be more neighbourly and thriving. There still was division growing up between the village and farming community but sometimes Government policies create and add to division. My dad used to be able to sell mutton to the city but now regulations stop that.” - Community 1

The main arguments against relaxing food standards centre around the potential for food poisoning and the implications for our export trade if homekill meat should get mixed into the export market. The reality is that homekill meat and recreational catch is already commonly consumed and the impacts of food insecurity upon our health statistics are far greater and having a much bigger burden on our health system than do incidences of food poisoning

New Zealand foreign affairs and trade is currently consulting on their ‘Trade for All’ agenda which seeks to ensure trade policies benefit all New Zealanders. We need to therefore weigh up the risk of homekill meat impacting the export market against the benefits that New Zealanders would derive from increased access to local meat and the opportunities that would arise for small businesses. Measures could be put in place to reduce the risk of homekill meat entering the export market such as not allowing exporting meat processors to process any homekill. Hefty fines and terms of imprisonment could be drafted into legislation to act as a deterrent against exporting homekill meat. Similar considerations could be given to relaxing regulations around dairy products to provide dairy farmers with greater options to sell products directly to local consumers.

The irony of our current food system is we have over regulation of staples such as meat and dairy products and under regulation of junk food. Inadequate incomes drive people to consume low-cost foods, and low-cost diets tend to be energy dense and nutrient poor (Darmon & Drewnowski, 2015). If taste preferences are established with this dietary pattern, it may be difficult for households to establish healthy eating patterns when they have adequate income (Anderson, 1990).

“I think we need to be looking after our growers and providers more in our country. They could be utilizing local growers and providers more regularly and the taxes and GST that goes on food – do it on the sugar and rubbish food not on staples. You can buy a 1.5 fizzy drink for cheaper than a normal 2L bottle of milk. People don’t understand the damage it’s doing.” -Education 3

11.1) Need to Regulate Unhealthy Food

The concerns raised locally regarding the widespread prevalence of unhealthy food is confirmed by academic research. An Infomas study conducted from 2014-2017 found that New Zealand’s food environments, especially children’s environments, are largely unhealthy, and policy implementation is low. The Government is not at the level of international best practice for many recommended food policies. Food industry commitments are relatively weak (Vandevijvere et al, 2018). The food insecure are particularly impacted by our unhealthy food environments with children living in food-insecure households were more likely to have consumed fast food or fizzy drinks three or more times in the week prior to the interview. Children in food-insecure households were also less likely to have met the guidelines for vegetable consumption, based on their average daily consumption patterns (Ministry of Health, 2019).

Figure 11) Interviewees discuss the widespread prevalence and impact of unhealthy food

“The nutritional value of the food is a lot worse, what most people eat anyway. A lot of cheap carbohydrates. Most people had a vege garden when I grew up.” - Farmer 4

“There should be government regulations saying poor quality food like junk food is put at the back of shops and healthy items at the checkout. Chocolate bars, Vs and lollies should be up high at the back of shop, out of reach of children.” – Community 2

“I think there is heaps more convenience, processed and fast food now and it is seen as the norm. It used to be a treat but now it seems to be the norm and for some families it seems to be the staple diet. Maybe advertising on TV, media and social media plays a big part eg pops on The Herald.” – Health 3

“There is some progress identifying fat, sugar content on processed food with food labelling. Other side of the coin is that a lot of it is subtle like where food is placed and how it is displayed in the supermarket. Sugary drinks are readily available and cheaper than milk or water. There is no regulation regarding healthy food for tuck shops in Schools. The placement of McDonalds and dairys is an issue – Health 1

There is no compulsion to reduce the price of meat and milk to subsidise the local market. Governments are reluctant to influence it as there is a clash between the benefits of high export trade and domestic prices. – Local Govt

“Talk to the Government about sugar taxes I’m so sick of sourcing the dentist for preschool children who have got deep seated fillings because of utter rubbish food which is cheap and easy and full of sugar. It’s a cycle but sometimes it only takes one to break the cycle.” -Education 3

The Informas study found that more than half of the packaged food supply is unhealthy. Children and young people are exposed to considerable marketing of unhealthy foods through all media channels. Less than half of schools have nutrition policies. Healthy diets were on average more expensive than current diets but both diets were unaffordable for those on low incomes. The food retail environment is relatively obesogenic, especially in more deprived areas (Vandevijvere et al, 2018).

On the positive side there is evidence that increasing the availability of affordable and easily accessible fresh foods makes a healthy diet more likely (Bidwell, 2009). The evidence also indicates that a barrier to making healthy food choices is lack of income, not knowledge of healthy foods; and that reducing the price of healthy foods can stimulate a change in purchasing decisions (Robinson, 2019). This highlights the importance of combined actions of both increasing the access of healthy food as well as tightening regulations on unhealthy foods.

Governments internationally are trying a range of policy responses to try and reduce salt and sugar consumption and improve food environments. Researchers from the University of Otago recently conducted a review of food taxes and subsidises to protect health. They concluded that the international evidence clearly indicates that tax and subsidy interventions have favourable impacts from a health perspective and would seem likely to work in the New Zealand setting (Wilson et al, 2020).

Critics of regulations such as sugar taxes argue that these measures are regressive and end up hurting people on lower incomes as taxes get passed on to consumers. This is why there needs to be a counter balancing subsidy of healthy food or removal of GST from staple foods. Relaxing food safety regulations and licensing costs for meat and dairy processing would help increase the accessibility of healthy food and stimulate local economies through enabling more cottage industry.

12) Putting the APEC 21 Roadmap into Action

Recently the APEC economies jointly recognised that a well-functioning food system is critical to our people’s health and wellbeing and to the success of our economies. The APEC 2021 Roadmap to Food Security has goals of increasing inclusivity, productivity and sustainability. The issue with our regulatory policies is that they are not inclusive as they support the status quo and discourage greater participation and innovation within the food system.

Public-Private Partnership for Food Security

leveraging the public – private sector partnership to achieve food security in the APEC region

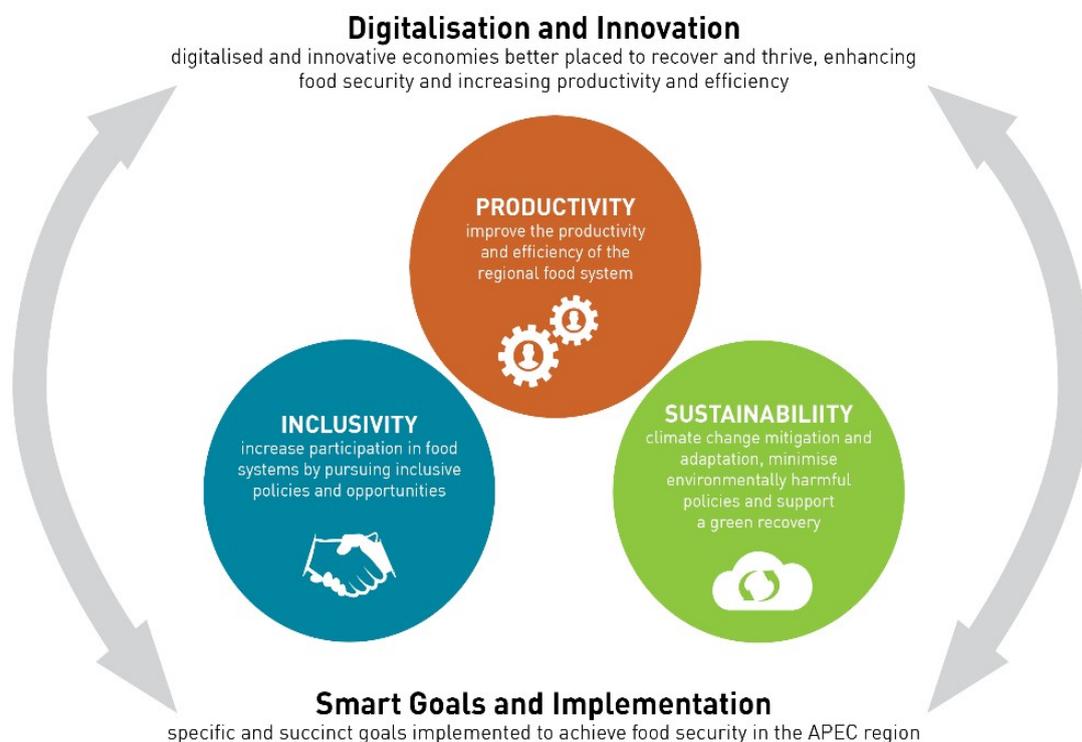


Figure 12: APEC 2021 Road Map to Food Security

12.1) Need for Inclusivity

If we want a food system that is inclusive then we need to diversify away from a system dominated by a supermarket duopoly. Shutting down alternative food outlets like butchers, green grocers, bakeries and farmers markets during the recent Covid19 lockdowns exacerbates the financial burden upon SMEs and inflates the profits and competitive advantage of the supermarkets.

“Supermarkets are the biggest threat to food security because they have driven down prices producers receive so food production becomes unsustainable. If we were paid what our product is worth we could do environmental work, pest control, employ more people. The price of food pushes producers towards a big industrial system in order to make it work financially.” -Farmer 2

The same sentiment was echoed internationally in a recent financial times article about the hidden costs of powerful buyers and cheap food prices “In the UK, every step of the food supply chain is suffering from labour shortages triggered by whipsaw demand and migrant workers going home. Employers in the farming, food processing and transport sectors all blame the same root cause. They say they relied on migrant workers because they had to compress labour costs to deliver the low prices demanded by large supermarkets.”- (O’Connor, 21 Sept 2021). This highlights the importance of the Government pursuing inclusive policies to enable increased competition in the food retail sector and alternatives to our major supermarkets.

12.2) Participation and Productivity

The primary industries are concerned about the disconnection between food producers and consumers, yet we embrace the economy of scale model which reduces the participation of people in food production.

“There are a lot more managers and shepherds now rather than small farm owners back in the day. People own one farm that used to be 3-5 farms. Amalgamations of farms, but we need that to make it work. Back in the day my old man had casual labour on his 600 acres, but you couldn’t make that work now – that’s why he was able to socialize alot.” – Farmer 5

If we want more people participating in our food system, then we need to work towards a model that focuses on adding value rather than the economy of scale model that focuses on efficiency and reducing costs. Former Tatua Chairman Alan Frampton was influential in moving the Tatua dairy company to value-add. In a 2003 interview he stated *“We’ve tried to develop a business to take advantage of being small. Fonterra has to take advantage of being big”* (Dann, 25 July 2003). The primary sector needs to help facilitate the development of farming models that enable small farms to be profitable. If we want to attract people back to the primary sector and the regions, then we need to create pathways for them to get into land ownership.

Internationally some innovative farmers like Joel Salatin and Gabe Brown have been able to increase participation and add value to their farms by stacking enterprises. This involves finding complimentary ventures that can be added to the existing farming business without the need for extra land, such as adding laying hens to beef farms and selling flowers from cover crops. Brown states that for every acre they have added \$220 (USD) value by stacking enterprises. He recommends partnering with young people from the community with the new enterprises to help open up a pathway for the next generation to get into farming (Paige, 4 May 2016). Enabling a shift towards diversification and stacking enterprises could open up the opportunity for greater people participation and for added income off smaller parcels of land.

The government could utilize Pamu farms to experiment with stacking enterprises to help advance a farming model that enables small landowners to be profitable. This would enable work done by Regional Councils and MPI into diversification opportunities to be practically tested on small areas of land to showcase alternative options for landowners. If Pamu made financial records available of such ventures, then it could give greater confidence to the banking industry to support stacking enterprise ventures and to ease up lending criteria for properties currently considered uneconomic due to size. A couple of interviewees mentioned the possibility for diversification locally.

“We have the luxury to create food for a smaller population of highest quality, best in the world. In other countries eg. Mexico, they use DDT, water quality is not good and the workers are paid minimum wages. The food story for our District is not being told well and there is a huge opportunity for real economic development eg. Diversifying into eels, crayfish, hops – King Country climate is the best in the world for growing hops. Also nuts and fruit.” – Local Govt 2

Stacking enterprises is an example of how we could improve inclusivity and productivity within our food system without placing added pressure on the environment.

12.3) Need for Sustainability

Another key factor mentioned both in the APEC 2021 Roadmap and in local interviews is the importance of our food system being sustainable. They highlight the importance of ensuring our food production methods are not causing environmental damage and that they are resilient so as to adapt to climate change. Reducing food waste was a topic raised by several respondents and is of particular concern with the closure of our local landfill in October 2020. Approximately 50% of household rubbish is green waste and Ruapehu District Council is setting up a hot composting unit to recycle that green waste and minimize the amount of waste being transported up to Hampton Downs landfill (Ruapehu District Council, 2021).

“We are great at producing food, but we waste a lot. Lots of fruit and veges go to waste because it doesn’t look nice. A lot of waste in supermarkets can be avoided.” -Farmer 2

Reducing food waste is the focus of some innovative initiatives supported by the Ministry for the Environment such as Kaicycle in Wellington which collects food scraps from restaurants, composts it to fertilise the community garden and then sells the produce back to restaurants. Rabobank also has a strong sustainability focus and supports initiatives such as Kiwi Harvest which collects surplus food to prevent it going to waste and redistributes it to people in need. A couple of interviewees mentioned the amount of food waste that is occurring with food in school initiatives.

“The bureaucracy of best before dates and the legalities of not being able to sell and give it away. Not learning from what has happened in the past like there has been fruit in schools for years but there will be box of bananas just going off.” – Local Govt 4

But locals also raised broader issues that impacted upon the sustainability of our food system. They saw the increase in carbon farming as a major threat to the sustainability of food production in our area. Some raised concerns about agricultural chemicals and the impact it was having on their food gathering environment. Some raised concerns about aspects of the food system being manipulated by commercial interests. Many raised the importance of self-sufficiency skills such as hunting and gardening and how sustainability also included passing on the knowledge and skills of food production and processing. Protecting food production, knowledge and heritage are also important aspects of ensuring long-term sustainability of our food system.

Figure 13: Interviewees discuss the impact of environmental factors and commercial interests upon the sustainability of our food system

“Even from a basic perspective with watercress and puha there is a risk because of the sprays and land owners aren’t as open to people going onto their property to pick it. There is also reduced area for people to go hunting. Fishing depending on the season you wouldn’t touch what you pulled out as the tuna (eel) has a funny look to it. – Community 3

“Losing valuable land for housing eg. Pukekohe- the high class horticulture land is being taken up for housing. Traditionally that was the food basket for Auckland. Luckily Ruapehu and Ohakune areas are good for growing vegetables and could be an opportunity for developing market gardening. Climate change could bring extremes in the future as warmer temperatures create issues.” – Local Govt 3

“I’ve noticed with the seedlings now you don’t get that productivity anymore because the seeds have been modified. Most of our seeds come from Holland and if something goes down then it is dangerous having them controlled by one country. They are encouraging people to plant the newer manuka varieties with large flowers but those new varieties haven’t acclimatized and it will cross pollinate with our native manuka and our native manuka will die out. Its about money the food system.” – Iwi 1

“Definitely the restriction of the farmers and government not supporting our food production as they should. Restricting them in so many ways. Fruit and all areas of food production are restricted by government. The wastage from fruit not up to export standard can’t be used for food in schools. There is nothing wrong with it but it just gets left as it has a mark on it or isn’t the right size, if that could go to schools it would be a saving. -Education 5

“We are dependant on the industry to feed us and it can never give us security as it’s dependant on oils, non-renewable resources and financial motives which our not always for our benefit. The only way to have food security is by growing in our own community and consuming from local growers rather than big companies and processed food. We are losing knowledge and the sense of security that we can take care of ourselves. That’s the issue.” – Community 4

While progress is being made upon food waste reduction I believe the broader sustainability issues also need prioritizing by Government and Councils. If we want to be sustainable long-term then we need to aim towards food sovereignty and creating a thriving local food system.

13) Benefits of a Local Food System

Figure 14: Interviewees discuss how our community could benefit from a local food system

“I think people would be happy to purchase a mutton/ whole lamb rather than smaller packs and if they could choose to buy that way they would. It is disappointing to people to see a lot of that good meat go offshore and not being able to access it.” – Govt 2

“You’d have less chronic diseases – diabetes, obesity and lots of other chronic conditions that go with those. Less childhood illnesses too with kids having better immune systems through being fed well and healthy. We are a high area with Rhymatic fever to do with socio economic status. – Health 4

“If a thriving farmers market developed and people were buying locally direct from producers for more than the tradition system, there was a direct relationship with the consumer and you’d know they could get it cheaper then elsewhere because you’d cut out the middlemen that would be hugely satisfying as a farmer to do that. We’ve seen farmers markets in other places and they are a community hub and a relationship builder.” – Farmer 2

“Help to all in desperate need” -Youth 3

“Reduce poverty, hungry people. We work and live here and want a better community. It would help with risk management if we had safe water and food supplies locally.” – Local Govt 2

“I definitely think its worth children being a part of it so that they know how it got there. Involve them in preparing the garden, planting, donating plants and harvesting. That’s sustainable.’ -Education 3

“I think kids would no longer have to worry about lunches, mental health issues reduced and less pressure on social services.” – Social Services

“They’d be looking after people and teaching them how to garden too. I think people need to get back to basics and create their own food system.” – Iwi 3

“The access would be immediate and local” – Beneficiary 2

By supplying local businesses rather than them having to get it from outside. It could be a lot cheaper and fresher. – Business 1

“The benefit would be a reduction in costs on food grants. The whole country would benefit if there was local MSD farms for local produce. We would have our own produce for sale and people would be happier and healthy in their areas. I guess it is probably the number 2 important thing after housing is having kai for survival – it’s a high priority for our people.” - Govt 1

Other potential benefits would be reduced CO2 emissions from less transportation. Increased self-sufficiency of the local food system leading to greater resilience of our regions. Increased economic stimulus of the regional economy through more money being cycled through small businesses in the local community. Increased competition within the food system and more options being provided for consumers. Increased connectedness and social wellbeing of our communities.

14) Conclusions

How might we develop a food system that benefits everyone in the community? Firstly we need to acknowledge the faults in our current food system which has led to people within our communities struggling to access food. Food insecurity is associated with multiple chronic health conditions and also impacts upon mental health, learning and social behaviour (Ministry of Health, 2019). It therefore presents the primary sector with an opportunity to have an enormous positive impact across multiple areas through helping to address food insecurity.

Local interviews revealed the following attributes need to be incorporated into designing a food system that benefits everyone in the community

1) Local and Community-led

A common theme was the detrimental impact of centralization and external decision making. There was a strong desire for local leadership and community-led initiatives not programs and services delivered at the community from people outside it. There was a desire to support local producers and businesses within community.

2) Focus on Self-Sufficiency

The ability of people to gather, grow, hunt, process and cook their own food was strongly valued within the community. There was a belief that a lack of self-sufficiency led to a feeling of powerlessness and a poverty of spirit. Many people commented on the widespread practice of gardening by previous generations and the need to return to growing our own food.

3) Need for passing on Food Education and Skills

People felt that Taumarunui was well equipped with local knowledge of food production, gardening and hunting and that these skills needed to be valued and passed down to help future generations to be food secure. There was a general feeling that the lack of awareness of nutrition and lack of cooking skills should be addressed by reintroducing food and nutrition education in schools.

Academics and social organisations have been calling for a national food strategy and the need to shift away from relying on charities to feed people. The Taumarunui community had a clear preference for a food system that shifted towards food sovereignty where people were self-sufficient and had the ability to grow, gather, process and trade food. However regulatory roadblocks need to be addressed by Government to enable a thriving local food system to develop.

I believe that the primary sector can have a role in enabling local food systems to develop through providing advice and education around food production. The primary sector could also partner with Government to consider strategies to help small landowners be more profitable. Government can also play an important role through creating a climate that encourages and enables the development of cottage industry.

“Our Community knows how to survive we just need more education to support learning techniques and coming together to develop kai sources for future generations” -Education 4

The case study highlighted the potential that exists within our rural communities to bring local solutions to “wicked” problems like food insecurity. Just as Taumarunui Whakaarotahi Trust looks to build on local strengths, we need to consider how can we build on our national strengths to create a food system that benefits all New Zealanders.

We all need to take some ownership for the problems within our food system. We can all bring something to the table when providing solutions. It comes back to the whakatauki “Naku te rourou, Nau te rourou ka ora ai te iwi.” – with your food basket, and my food basket the people will thrive.

15) Recommendations

(Community/Local Govt/ DHBs)

- Consult widely amongst the community to avoid making assumptions about who is interested in food security and who can help bring solutions
- In designing a food system to benefit community consider the unique strengths of the area and the strengths and values of the people within your community

(Primary Industries)

- Connect with Kore Hiakai so as to be part of food security conversations and investigate ways to better integrate current food security initiatives with education from food producers regarding how that food is grown.
- Horticulture industry to partner with community and marae-based gardens and offer advice as part of fulfilling their vision of ‘healthy food for all, forever’
- Partner with Government and local communities in developing models to help small landowners be profitable and develop pathways for people to get into land ownership

(Government)

- Increase access via changes to food safety regulations and reducing barriers to cottage food industry
- Increase regulation of processed foods high in sugar/salt and saturated fats with the aim to reducing the availability and marketing of unhealthy food – particularly to children.
- Establish a national food strategy that involves seeking to enable and facilitate the creation of local food systems
- Utilize Pamu farms to experiment with stacking enterprises appropriate to the local area to identify diversification opportunities for small landowners and increase participation in food production.

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Appendix A

(Circle category that applies)

Farmer / Education / Health / Social Services / Iwi / Beneficiary / Youth / Business / Community

Iwi: _____

Community Wellbeing

- 1) How would you describe a thriving community?

- 2) On a scale of 1-5 how would you rate your local community? (1-disintergrating, 5 - thriving)

- 3) How regularly do you use Council community facilities such as halls?

- 4) What do you think is limiting/ preventing your community from thriving?

- 5) How would you compare your community with the past/ the community you grew up in?

Food Security

- 6) How well do you think the NZ food system delivers for our country?
 - a) for your community?

- 7) What do you think are the main factors contributing to food insecurity in NZ?

- 8) How would you rate your experience of food insecurity?
(1-No experience, 2- Know people experiencing 3- Personal experience in past
4- Regularly experience, 5- daily experience)
 - a) (If experiencing food insecurity) Tell me about this experience?

 - b) Where do you go for help?

 - c) What would need to change for you to be able to more easily access food?

9) Does our current food system differ much from when you grew up? In what ways?

10) If there was a local food system designed to benefit everyone in the community in what ways do you think (education/ health/youth/ social services/ iwi/ beneficiaries) could contribute?

a) In what ways would (education/ health/youth/ social services/ iwi/ beneficiaries) benefit from a local food system?

Transition into Work

11) What qualities and skills do you think employers are looking for?

12) How much importance do you think employers would place on character/ good habits/ attitude?

(Rate 1-5: 1 – not important, 5- essential)

13) How much importance do you think employers would place on technical skills?

(Rate 1-5: 1 – not important, 5- essential)

14) How much importance do you think employers would place on education/ qualifications?

(Rate 1-5: 1 – not important, 5- essential)

15) What do you think are the barriers holding people back from getting employment?

16) What actions do you think someone could take that would help them transition into employment?

Appendix B

Themes	Health	Education	Local Govt	Govt	Youth	Farmers
Community						
Connection/ Unity	H3, H4	1, 2, 3, 4, 5, 6	L1, L2, L3, L4	G1, G2, G3	Y2, Y1, Y3	F2, F3, F4, F5
Resources/ Services	H1, H3	E2, E3, E4	L1, L3	G1, G2, G3	Y2	F2, F3, F4
Centralisation	H3	E2	L1, L3		Y2	F2, F4
Events/ Activites	H1, H2, H4	E2, E5, E6	L2, L3	G3	Y1, Y3	F2, F5
Self-sustained		E2, E3		G3		F3
Economy/ Jobs	H1, H3, H4	E2, E3	L3	G1	Y3	F1, F2, F4
Leadership	H3		L2			
Housing	H1	E2				F2, F5
Healthy	H1, H3, H4	E1	L2, L4			F2
Inequality			L4	G2		
Education	H3, H4					
Low crime/ Safe	H1, H3	E1, E3	L2			
Poverty/ Money	H1, H3	E1	L2, L4	G1, G2		F1, F2, F3, F4
Busy/ societal changes	H2	E1		G2, G3		F5
Environment			L4			F2, F3
Food System						
Centralisation	H1, H3	E1	L4	G1, G2		F2
Localism	H3	1, 2, 3, 5	L1, L2, L3, L4	G2, G3		F2, F5
Access to unhealthy	H1, H3, H4	2, 3, 4, 5, 6			Y2	F2, F3, F4
Restrictions -Food safety		1, 4, 5, 6	L4	G2, G3		F2
Cost of food	H2, H3, H4	E1, E2, E3	L1, L3	G1, G2	Y1, Y3	F1
Price -unhealthy food	H1	E2, E3, E5			Y2	F4
Commercialisation		E2	L4			F2
Export price			L3	G1, G2		F1, F5
Supermarket monopoly	H3		L4	G1		F2
Self sufficiency		E2, E4	L2, L4	G2, G3	Y1	F3
Gardening/ Hunting		E2, E4	L3, L4	G2	Y2	F3, F4
GM seeds/ chemicals					Y2	
Variety/ options	H1, H3	E6	L4	G2		
Food education/ Skills	1, 2, 3, 4	2, 3, 4, 5	L2	G2, G3	Y2	F2, F3
Land ownership						F3
Transport	H3		L3, L4			
Food waste		E1, E5	L1, L4	G2		F2, F3
Competing land uses		E5				

Themes (continued)	Business	Iwi	Community	Social Services	Beneficiary	Total
Community						
Connection/ Unity Resources/ Services	1, 2, 3	I1, I2, I4	1, 2, 4, 5, 6, 7	S1, S2, S3, S4	A1,A2	40
Centralisation	B1, B3		C3, C5, C6			12
Events/ Activites	B2	I2		S3	A1, A2	18
Self-sustained		I3	C1, C4			7
Economy/ Jobs	B1, B3	1, 2, 3, 4	C3, C6	S1, S2, S4		22
Leadership	B2, B3		C6	S4		6
Housing		I1, I2, I3	C6	S4		9
Healthy			C3, C6			9
Inequality			C4, C6			4
Education		I2	C6	S3		5
Low crime/ Safe		I1	C5, C7	S1		9
Poverty/ Money		I3	C6			13
Busy/ societal changes		I3	C6	S4		8
Environment	B2		C6			5
Food System						
Centralisation	B2, B3 B1, B2,	I1	1, 3, 4, 6			14
Localism	B3	I2	C4, C6		A1, A2	21
Access to unhealthy Restrictions -Food safety	B2		C4	S2, S4		16
Cost of food	B3	I2, I3, I4	C1, C3			14
Price -unhealthy food	B1, B3	I1, I2	C3, C7	S1, S2, S3, S4	A1, A2	25
Commercialisation	B2		C3			8
Export price		I1	C1, C4, C6			7
Supermarket monopoly	B3	I1	C3	S2	A2	10
Self sufficiency		I1, I3	C1	S1		8
Gardening/ Hunting	B2, B3	I2, I3	1, 2, 3, 5, 6, 7	S2, S4		20
GM seeds/ chemicals	I2	I2, I3	3, 4, 5, 7	S2, S4	A1	18
Variety/ options		I1	C2, C3, C7			5
Food education/ Skills	B2	I1	C4,	S1		9
Land ownership	B2	I2, I3, I4	C3	S1, S4		20
Transport			C3, C4, C6			4
Food waste	B3		C3		A1	6
Competing land uses			C6			8
		I1	C3			3