

The decline of rural community services

MARCH 25,
2022

Kellogg's Rural Leadership Programme
Course 45 2022



Waipukurau Hospital, 2022



KELLOGG
RURAL LEADERSHIP
PROGRAMME

Written By:
Caroline Batley

Disclaimer

In submitting this report, the Kellogg Scholar has agreed to the publication of this material in its submitted form.

This report is a product of the learning journey taken by participants during the Kellogg Rural Leadership Programme, with the purpose of incorporating and developing tools and skills around research, critical analysis, network generation, synthesis and applying recommendations to a topic of their choice. The report also provides the background for a presentation made to colleagues and industry on the topic in the final phase of the Programme.

Scholars are encouraged to present their report findings in a style and structure that ensures accessibility and uptake by their target audience. It is not intended as a formal academic report as only some scholars have had the required background and learning to meet this standard.

This publication has been produced by the scholar in good faith on the basis of information available at the date of publication, without any independent verification. On occasions, data, information and sources may be hidden or protected to ensure confidentiality and that individuals and organisations cannot be identified.

Readers are responsible for assessing the relevance and accuracy of the content of this publication and the Programme or the scholar cannot be liable for any costs incurred or arising by reason of any person using or relying solely on the information in this publication.

This report is copyright, but dissemination of this research is encouraged, providing the Programme and author are clearly acknowledged.

Scholar contact details may be obtained through the New Zealand Rural Leadership Trust for media, speaking and research purposes.

Acknowledgments

I wish to thank the Kellogg Programme Investing Partners for their continued support.

Strategic Partners



Programme Partners



Service Partners



I thank and acknowledge Doctor Patrick Aldwell, Doctor Scott Champion, Chris Parsons, Lisa Rogers, Annie Chant and Desley Tucker for providing a first-class leadership programme.

This report is dedicated to my late grandfather Barrie Mabin who passed away in January 2022. Grandad was an advocate of sheep, beef and deer farming in Central Hawkes Bay; a community volunteer; a passionate advocate of rural communities; a family man; an avid Cessna pilot; and most importantly, a gentleman.

I would also like to acknowledge my parents, Heather Mabin and Roger Batley, and my grandparents, Margaret and Robert (Tony) Batley and Railene Mabin – all advocates and champions of New Zealand's rural sector. I hope my brother Richard Batley, a Taihape sheep and beef farmer, completes this programme one day. To my partner, Mark, thank you for your support during this programme.

Thank you also to AGMARDT for awarding me a leadership scholarship to complete my Masters in Public Policy with Victoria University this year. I am grateful for your assistance.

For the reader's background, I live with my two children in Cambridge and have an employment history as a lawyer and banker. Although I mention Taihape Area School and Central Hawkes Bay College in the following report, I attended boarding school at Iona College in Havelock North from age ten. I spent my 6th and 7th form years boarding at Wanganui Collegiate.

Table of Contents

1.	Executive Summary	6
2.	Introduction	8
2.1	Family Background - Moawhango	8
2.2	Family Background - Takapau.....	9
3	Objective of Report	10
4	Methodology used.....	10
5	Defining 'rural' communities	11
6	Urbanisation in New Zealand	14
7	Factors influencing urbanisation.....	14
8	The 'Hollowing out' of rural communities	15
9	Other issues facing rural communities	16
10	Importance of Primary Industries	17
11	New Zealand Government priorities	18
12	Healthcare outcomes.....	19
12.1	Rural healthcare services	19
12.2	Plunket	21
12.3	Rural mental health	21
13	Policing in rural communities	22
14	Education	23
15	Employment in rural areas.....	23
16	Services - other	24
16.1	Exit of retail banks	24
16.2	Rural Broadband Initiative	25
16.3	Events supporting communities.....	26
16.4	Water & Energy	27
16.5	Roading infrastructure	27
17	Case Studies	28
18	Study One: Putāruru.....	28
19	Study Two: Taihape	32
20	Study Three: Pirongia Forest.....	36
21	In brief – International Focus	38
22	Conclusion	39
24	References and list of contributors	41

List of Figures

Figure 1: Urban-rural continuum (Source: Statistics New Zealand, 2020)	11
Figure 2: New Zealand urban:rural population 1881-2006 (Source: Thorns & Schrader, 2010)	12
Figure 3: 2007 North Island urban/rural areas (Source: Ministry of Health, 2021)	13
Figure 4: 2007 South Island urban/rural areas (Source: Ministry of Health, 2021)	13
Figure 5: Trends in New Zealand small urban areas: 1996-2018 (Source: Nel et al., 2019)	14
Figure 6: Projected increase in population by area, 2018 to 2038 (Source: Health and Disability System Review, 2019)	16
Figure 7: Farmland use area from 2002-2019 (Statistics New Zealand, 2021a)	17
Figure 8: Rural Community Hubs (Source: New Zealand Government, 2021a)	19
Figure 9: North Island map of broadband connectivity (Source: Broadband Map NZ, 2021)	25
Figure 10: Population of Putāruru Rural, 2006- 2018 (Source: Statistics NZ, 2018b) ...	28
Figure 11: Highest qualification in Putāruru Rural 2006-2018 (Source: Statistics NZ, 2018b)	29
Figure 12: Work and labour force status in Putāruru Rural, 2006-2018 (Source: Statistics New Zealand, 2018b)	29
Figure 13: Summary - 2018 Census Data - Putāruru Rural compared to national averages	31
Figure 14: Population in Taihape, 2006-2018 (Source: Statistics NZ, 2018d)	32
Figure 15: Highest qualification in Taihape, 2006-2018 (Source: Statistics NZ, 2018d)	33
Figure 16: Work and labour force status in Taihape, 2006-2018 (Source: Statistics NZ, 2018d)	33
Figure 17: Summary - 2018 Census Data - Taihape compared to national averages ...	35
Figure 18: 'Pirongia Forest' Map (Source: Statistics New Zealand, 2018e)	36
Figure 19: 'Pirongia Forest' on the Deprivation Index (Parliamentary Service, 2021) .	36
Figure 20: Summary - 2018 Census Data - Pirongia Forest compared to national averages	37

1. Executive Summary

Rural communities have experienced much 'hollowing out' since the 1930s despite supporting the primary sector - a vibrant and integral part of New Zealand's economy. Many rural centres have lost their hospitals, police stations, banks, government departments, schools, sporting clubs and churches. This report explores whether healthcare, employment, crime and education outcomes have worsened for rural residents compared to their urban counterparts due to these changes, and recommends enhancements to public policy to address this.

The report firstly outlines what being 'rural' entails in a New Zealand context. It then describes how urbanisation has increased globally, with only 13% of residents in New Zealand now residing rurally. A brief history explains events that encouraged urbanisation. An evaluation follows to understand what impact has been felt within rural areas, and how organisations are currently operating to support rural communities. A case study of two 'rural' towns and one forestry area is provided to assess how 2018 Census data of rural areas tracked comparatively to national averages. This research is essential to determine if additional Government or Non-Government Organisation support is required to ensure our rural communities thrive.

1.1 Key recommendations

The author believes the following recommendations can be made to Central Government regarding priorities for rural communities:

Healthcare:

- Targeted incentives for rural health professionals to attract and retain health professionals in rural areas.
- Establish a School of Rural Health to support rural healthcare in New Zealand.
- Expansion of services offered by rural mobile health service providers to improve rural health outcomes for Māori and non-Māori.

Employment:

- Expansion of the Local Government New Zealand 'Think Rural' programme to attract young people to rural areas for employment opportunities.
- Increased visa opportunities to attract employees to the food and fibre workforce.

Education:

- Targeted campaigns in rural schools promoting higher education upon completing secondary school. Government or private tertiary scholarships to be offered to rural pupils to attract talent.

Policing:

- Ensuring that all rural areas have a designated police officer per head of population (metric to be prescribed by the New Zealand Police) with appropriate facilities.
- Comprehensive induction and improved supervision and relief for rural police.

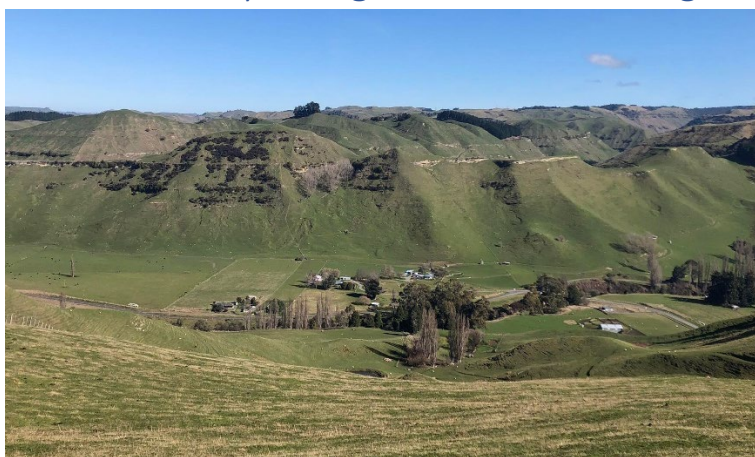
Other:

- Expansion of Rural Community Hubs and Banking Hubs across New Zealand. Building the capacity of rural support trusts.
- Establish a 'one-stop' website for rural communities, charities, authorities and project holders to collaborate and support rural communities.
- Removal of additional postage costs for rural addresses.
- Extension of the Rural Broadband Initiative programme and increasing coverage areas for cellphones in rural areas.

2. Introduction

To provide some context around my background, I will briefly outline the two rural communities where I was born and raised and that my family still farms today. This will provide context for why I have an interest in the impact of the decline in services to rural communities, and why I wish to understand opportunities for Central Government to remedy the 'postcode lottery' that exists in New Zealand, and to better support the approximately 13% of New Zealanders that have worsened access to health, educational and employment services as compared to their urban counterparts because of the geographic areas they live in.

2.1 Family Background - Moawhango



Moawhango Valley, Rangitikei

My paternal side of the family descended five generations ago from pioneers Robert and Emily Batley, who established the family's sheep and cattle farming operations in a small settlement called Moawhango in the Central North Island. The farm was established in circa 1870. Today my brother and his family, my father and my uncle and aunt live in Moawhango, a rural community with a surrounding population of approximately 650¹.

By the 1890s, Moawhango had a general store that opened in 1882, a post office in 1883, stables, a boarding house, killing house, swagger quarters, jail and band room. The homestead was built in 1882, and the family Memorial Chapel after 1899. It is reported in the Poverty Bay Herald that the farming operation had 60,000 sheep in 1903. At one time, there were over 100 people employed on the station: cowmen, cooks, butchers, gardeners, general hands, shearers, engineers (for the wagons), blacksmiths, bullock trainers, drivers, musterers, swaggers and the like. Today, only one community hall, two churches and one primary school remain. All stores previously opened in the settlement are now closed. As of July 2021, the roll of the local primary school, Moawhango School, which has a decile of five², was just 14 (Education Review Office, 2021a; Ministry of Education, 2015). Moawhango is 19 kilometres from the nearest town, Taihape.

Moawhango School was the first primary school that I attended, and at the time I was there, the school roll was between 20-30. Kindergarten education was delivered to the district through "the Hunterville-based mobile kindy service" operated by two teachers that drove to the local Moawhango Community Hall once a week, who brought toys and games for pre-

¹ Moawhango had a population of 651 in the 2013 New Zealand census (NZ Statistics, 2013)

² A 'decile' is a socio-economic ranking of a school student's community relative to the country – 1 means the school is in the 10% of the highest proportion of socio-economic communities, 10 in the lowest 10% (Ministry of Education, 2021). Decile rankings were last determined in 2015 (Ministry of Education, 2015).

schoolers to play with that were stored and transported in a van. Other Kindergarten opportunities were provided in Taihape, 20 minutes away. The closest high school from Moawhango is situated 19 kilometres away in Taihape.

There is no cellphone coverage in the flats of the Moawhango Valley, and high-speed internet is provided via satellites installed on homes through the Rural Broadband Initiative at the cost of approximately \$2,000 per installation (Gravity Internet, 2020). Having no cellphone coverage increases health and safety risks that individuals who have accidents on the farm cannot communicate that they are injured. Internet connectivity limited only to a radius around homes on the farm can also provide challenges.

2.2 Family Background - Takapau



“Taniwha”, Central Hawkes Bay

My maternal side of the family descends from a fourth-generation farming operation in Central Hawkes Bay. The farm, “Taniwha,” was historically a sheep and cattle station in 1897, a deer farm for ten years, and is now a bull and cropping farm. It is located eight kilometres away from neighbouring Takapau. Takapau has a population of approximately 520³, and in 2017 the main primary school, Takapau School, decile 4, had a roll of 118 pupils, with 37% identifying as Māori (Pollock, 2015, Education Review Office, 2021b; Ministry of Education, 2015). Takapau School was the second primary that I attended as a student, and the school that I predominantly had my primary school education at. The Takapau community is 20 kilometres from the neighbouring town of Waipukurau.

When my grandparents settled on the farm in 1960, Takapau had a chemist shop, petrol station, a stock and station agent, grocery store, bank, fruit and vegetable shop, post office, general store, electronics shop, doctors practise, Plunket facilities, hotel, butcher, café, bus depot and a railway station. A Masonic Lodge and three churches were based in Takapau. Now a handful of sporting clubs, one church, a Playcentre, a fish and chip shop, a Four Square supermarket, the primary school and a Te Kura Kaupapa Māori O Takapau school are all that remain. The nearby Silver Fern Farms freezing works, which opened in the 1970s, is a significant employer of the town. The demise of the facilities at Takapau has meant that the community has not grown.

The closest local high school from Takapau is Central Hawkes Bay College, which is 14 kilometres away. Central Hawkes Bay College, which has a decile of 4, has around 520⁴ pupils, with 39% identifying as Māori (Education Review Office, 2017; Google, 2014). In

³ Takapau had a population of 522 in the 2013 New Zealand census (New Zealand Statistics, 2013)

⁴ Central Hawkes Bay College had a total roll of 520 in 2017 (Education Review Office, 2017).

2017, 36% of Year 13 students achieved University Entrance, 75% achieved Year 13 Level 3, 82% achieved Year 12 Level 2, and 73% achieved Year 11 Level 1 (Education Central, 2018). Only 84% of Year 13 students attempted University Entrance and NCEA Level 3.

The nearest hospital from Takapau is the Hawke's Bay Fallen Soldiers' Memorial Hospital, 73 kilometres away. The local hospital in Waipukurau closed in 1999 and has been replaced by the Central Hawkes Bay Health Centre, which has two small wards with eight beds for locals discharged from the Memorial Hospital (Dominion Post, 2019).

Over the past 18 months, the Westpac, BNZ, Rabobank and Kiwibank branches have closed in Waipukurau (Hawkes Bay Today, 2020; Stuff, 2021a; Coöperatieve Rabobank U.A. (New Zealand Branch), 2021). One branch remains – the ANZ Bank.

Employment statistics show that in 2018 3.5% of residents in Waipukurau East were unemployed, and 40.4% of residents were not in the labour force (Statistics New Zealand, 2018a).

Although there can be intermittent cellphone coverage issues on the property, there is generally cellphone coverage in Takapau; however, cellphone coverage is patchy between Takapau and Waipawa with some cellphone providers, and on some areas of Taniwha.

3 Objective of Report

Given the basis of my family history and my family members being situated in rural New Zealand, I remain interested in understanding whether living rurally instead of in a New Zealand urban centre affects a family's employment, health and educational opportunities. Would my two nieces, born two years after my children, have lesser educational opportunities because they were in a rural community with a school roll of 14 rather than my daughters, who are at a primary school with a roll of 410 students? Did the closure of the local hospital mean that travelling 118 kilometres to a hospital in the event of an emergency would result in worse health outcomes for their family rather than the 25 kilometres I need to travel for hospital treatment for mine? Perhaps the conclusions of these scenarios are apparent in the event of an emergency. This research will determine if additional Government or Non-Government Organisation support is required to improve healthcare, educational and employment outcomes for rural New Zealanders.

4 Methodology used

To determine these factors, I conducted approximately six informal interviews with community leaders to understand the issues facing rural towns with increased urbanisation. I then conducted an extensive literature review of academic texts and media articles to determine if these issues were substantiated. I next collected information from three rural regions which had data from the 2018 New Zealand census and compared it with national averages data to establish if the socio-economic metrics of these areas were worse than urban areas. The outcomes of the case study review are prepared in three tables in this report. Lastly, I briefly observed issues that rural communities face in Australia, Canada, America and the European Union. As a literature review predominantly supports this report, a limitation of the information is the different definitions each scholar uses to define regions as "rural" and "urban."

5 Defining 'rural' communities

To understand if there are significant health, educational and employment differences between rural and urban New Zealand, we must first define what 'rural' is. No one international metric categorises 'rural' and 'urban' areas, as populations differ from country to country. Rural communities lie on a continuum of being "very remote" (isolated farms and fishing communities in the "rural other" category) to people in towns that service rural areas (Ministry for Primary Industries, n.d.). The continuum is detailed below.

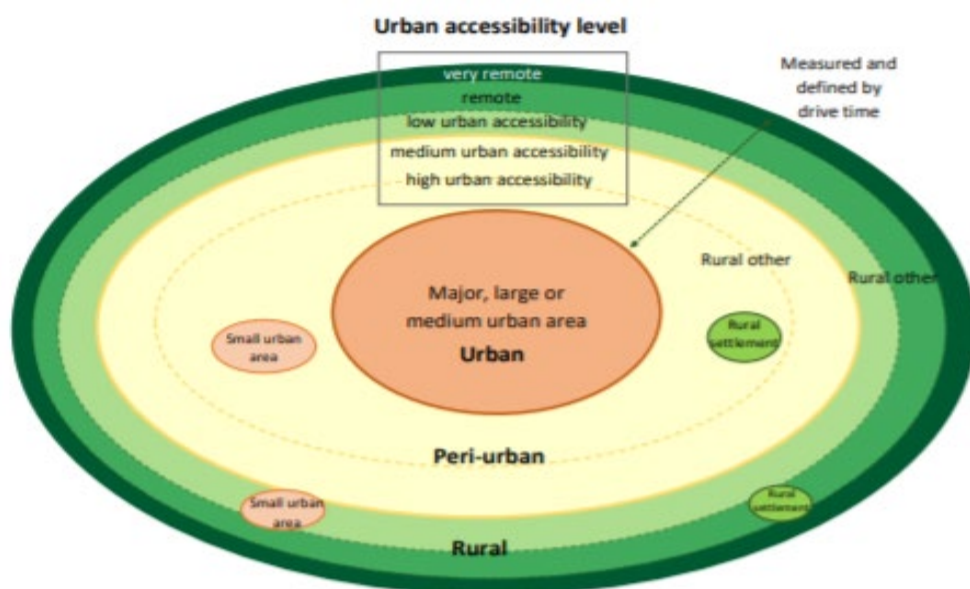


Figure 1: Urban-rural continuum (Source: Statistics New Zealand, 2020)

"Urban areas" often have high population density and infrastructure of a built environment comparatively to "rural", which has a low-density human settlement (Statistics New Zealand, 2017a). Statistics New Zealand (2020) created the below categorisation for areas:

- Urban:
 - "Major urban area" – Towns/cities with a minimum of 100,000+ residents;
 - "Large urban area" – Towns with between 30,000 and 99,999 residents;
 - "Medium urban area" – Towns with between 10,000 and 29,999 residents;
 - "Small urban area" – Towns with between 1,000 and 9,999 residents.
- Rural
 - "Rural settlement" – Populations of between 200 and 1,000 people, at least 40 residential dwellings and a cluster of dwellings with at least one community or public building; and
 - "Rural other" – Mainland and islands outside rural settlements or urban areas.

The Department of Internal Affairs states that despite our perception that we are a rural nation, we are one of the most urbanised nations in the world. Over half of our landmass is used for forestry and agriculture, and a third is native forest and conservation land (Department of Internal Affairs, 2008). Some metrics define 1 in 4 New Zealanders as living in a rural setting (Ministry of Primary Industries, n.d.). In 2020, the rural population in New Zealand was reported at 13.3%, dropping from 16.3% in 2018, with only 2-3% of the population being farmers and their families (World Bank, 2020; Federated Farmers of New Zealand, n.d.). Last year, KPMG (2021) stated that 650,000 people live in rural New Zealand. The graph below shows the trend of urbanisation in New Zealand.

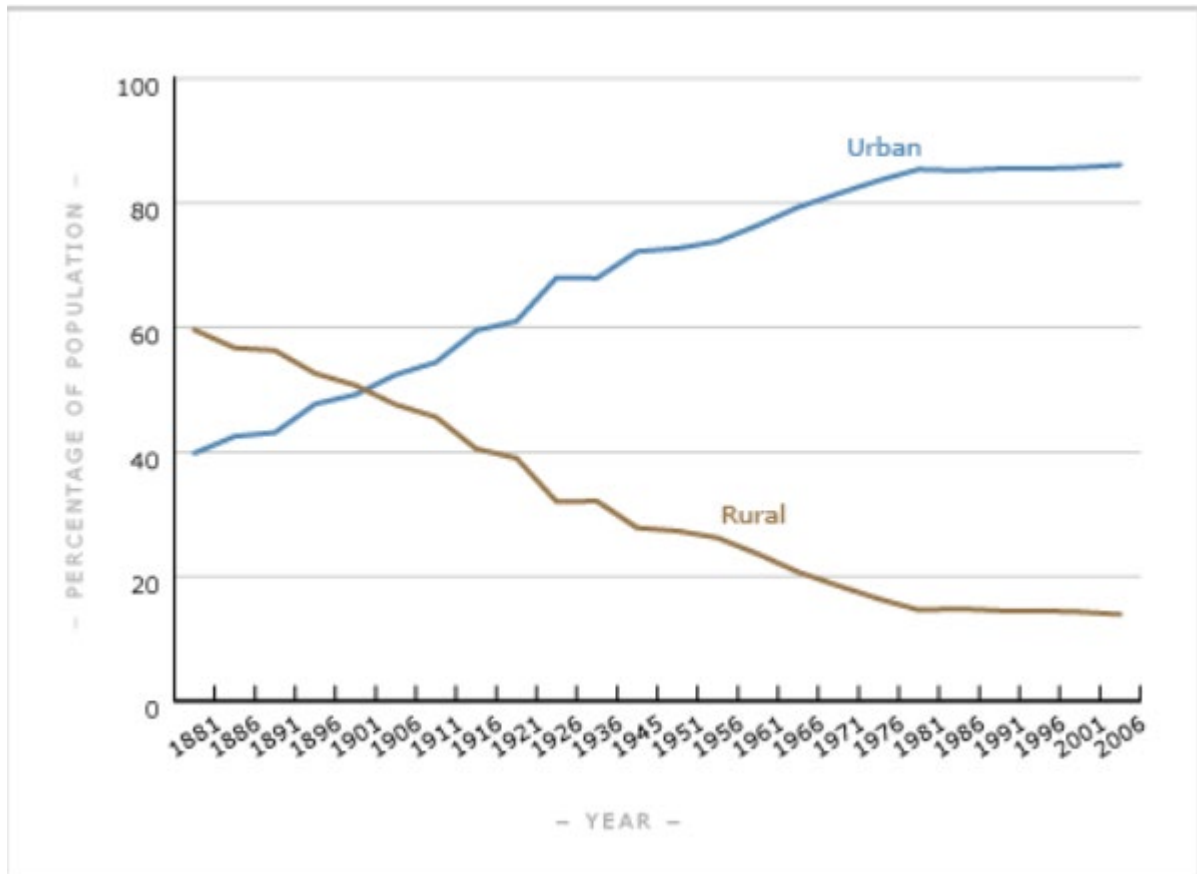


Figure 2: New Zealand urban:rural population 1881-2006 (Source: Thorns & Schrader, 2010)

The two maps below classify areas as ‘urban’ or ‘rural’ based on whether a place is a main, satellite or independent urban area, or a rural area with high, moderate or low urban influence based on their population in 2007 (Ministry of Health, 2021).

For data collection purposes for the case studies, ‘rural’ will be defined as areas with under 2,500 citizens. This allows towns such as Methven, Moerewa, Edgecumbe and Taihape to be deemed ‘rural,’ as these towns strongly support the rural areas they service (Statistics New Zealand, 2021a). This is wider than the Statistics New Zealand categorisation of 1,000 residents but aligns with the Ministry of Health maps, which shows our nation is predominantly in the green category, with urban areas shaded red, pink and orange.

Figure 3: 2007 North Island urban/rural areas (Source: Ministry of Health, 2021)

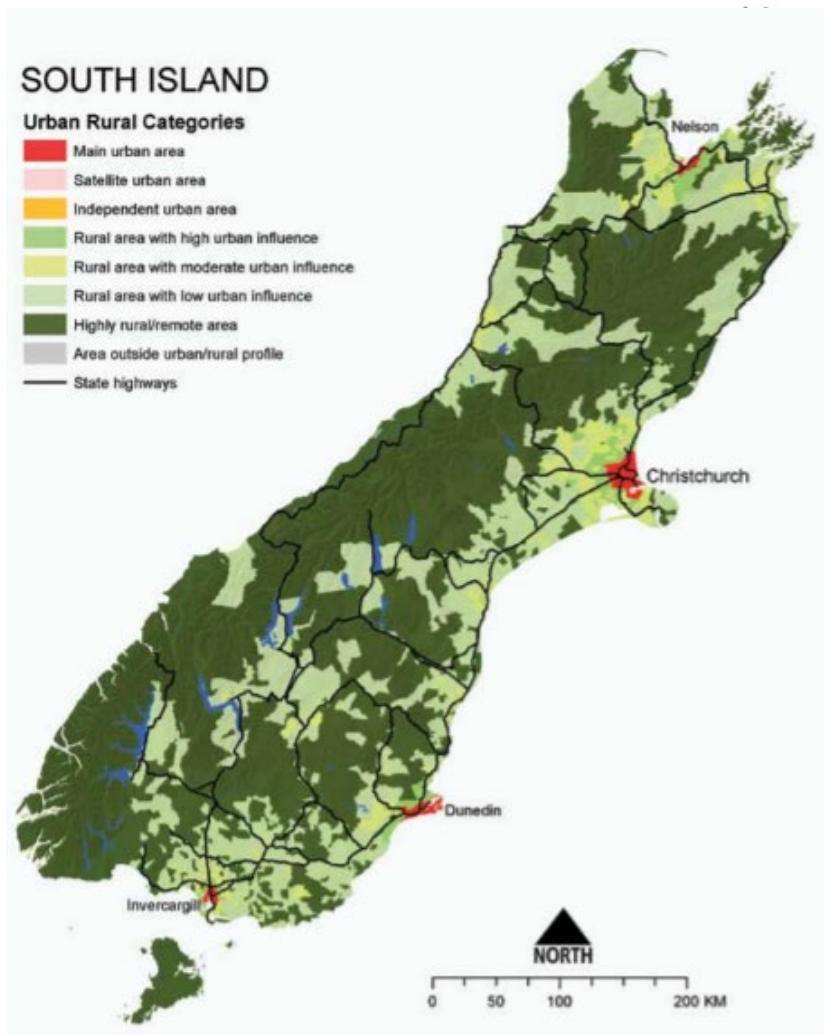
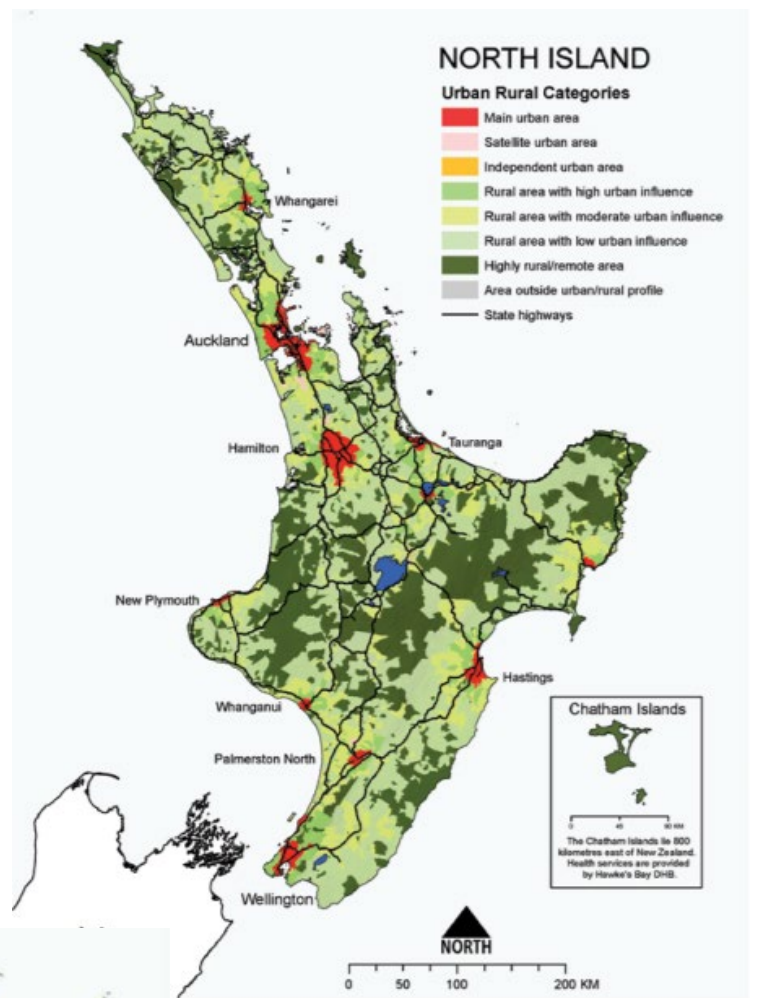


Figure 4: 2007 South Island urban/rural areas (Source: Ministry of Health, 2021)

6 Urbanisation in New Zealand

Urbanisation has increased globally over the last 200 years (Nel, Connelly & Stevenson, 2019). In New Zealand, rural depopulation between 1996 and 2013 left one-third of the nation's territorial authorities to decline in size and in 2018 eighty-six percent of New Zealanders were deemed to live in urban areas (Chakravarthy, Charters & Cochrane, 2019). Urbanisation has occurred predominantly due to changes in the economy, natural disasters, increased job opportunities in urban centres and poor rural roading infrastructure. This is explained further below.

Auckland and 12 other territorial authorities enjoyed 90% of the population growth, with the remaining 10% of growth spread in 32 territorial authorities (Jackson & Brabyn, 2017). Between 2001 and 2013, populations in the 'highly rural area' decreased by -0.5%, and today the population is broadly categorised as:

- 51.2% of the population resides in major urban areas (Auckland, Wellington, Hamilton, Tauranga, Dunedin and the Lower Hutt);
- 14.1% reside in large urban areas (Invercargill, Rotorua and Whanganui);
- 8.4% reside in medium urban areas (Cambridge, Rolleston and Te Awamutu);
- 10.0% reside in small urban areas (Gore, Thames and Stratford); and
- 16.3% reside in rural areas.
(Environmental Health Intelligence New Zealand, 2018).

Trend	No. of places	% of all places
Absolute decline	14	9.6%
Decline then plateau	42	28.8%
Grow	48	32.9%
Decline then reverse/grow	22	15%
Plateau/stable	8	5.5%
Other trends	12	8.2%
Total	146	100%

Figure 5: Trends in New Zealand small urban areas: 1996-2018 (Source: Nel et al., 2019)

7 Factors influencing urbanisation

To understand the decline of rural services to New Zealand, one must first understand the history that has driven rural to urban migration. This assists in determining if historical drivers and motivations are still relevant today, and whether the trends will continue. Several events impacted rural-urban migration. Pomeroy (2019) lists the following factors which influenced rural citizens to migrate to urban centres in the 1980s:

- Poor communications (for example via party-lines on telephone services);
- Lack of all-weather roads to essential services;
- School bus services being inadequate;
- Overbearing rural building restrictions;
- Unavailability of rural housing loans;

- Limited job opportunities for rural wives; and
- Poor television reception.

The removal of farm subsidies in 1984 and 1985, when the Central Government had a neoliberal agenda, coupled with the farming sector being crippled by droughts, the 1987 global stock market crash, and the 1997 Asian financial crisis have all impacted the decline of rural communities (Pomeroy, 2019). Prior to 1984, agriculture was highly protected through subsidies, and income and price support encouraged market distortions, marginal land to be used in production, and the degradation of marginal land (The Convention on Biological Diversity, n.d.). The deregulation of Rogernomics in the 1980s privatised or dismantled many quasi-government organisations and boards of producers, with private corporations and several businesses taking their place (Campbell, 2021). Events like Cyclone Bola in 1988 also caused widespread devastation and loss for rural communities. Cyclone Bola damaged approximately 3,600 hectares of farm and horticultural land, affected 1,765 farmers, and the losses to farming and horticulture were estimated to be around \$90 million (Christchurch City Library, n.d.). Farms continued to amalgamate to remain economical, dairy factories and sale yards consolidated resources, meat-processing plants closed, and government agencies relocated to larger areas (Pomeroy, 2019).

Historically, Māori were almost entirely rural, however many began migrating from rural communities to urban centres predominantly from the late 1930s (Derby, 2011). To give the reader an appreciation for life in the 1940s, a 1940 survey of 462 dairy farms showed 78% owned a motor vehicle, 63% owned a telephone, 46% had running water to a bath, sink or tub attached to a drainage system, and 16% had a septic tank (Doig, 1940). Rural-urban migration of Māori accelerated after World War 2, when the Māori Affairs Amendment Act 1967 allowed the compulsory acquisition of Māori land (Pomeroy, 2019). After the Second World War, many Māori moved to the city for employment, and between 1936 and 1986, the Māori population changed from 83% rural to 83% urban - one of the fastest urbanisation rates in the world (Derby, 2011). This was exacerbated particularly in the 1960s, when changes to town planning forced urbanising of rural communities to improve water and sewage systems which were more easily managed in towns (Pomeroy, 2019). It is interesting to note that Māori agribusiness is worth \$13 billion in food and fibre sector assets, including 30% of sheep and beef production; and Māori horticulture has grown 300% during the past 12 years (AgResearch, 2021).

8 The 'Hollowing out' of rural communities

As described above, with the net migration loss in rural centres, there has also been a "hollowing out" of communities in terms of policing, recreational facilities, sports teams, educational facilities, retail services and health facility closures. If one drives through Te Kuiti, Dannevirke, Taumaranui and Huntly, one will observe the effects of the decline in a rural town. Migration to larger centres has resulted in many small rural towns closing shops, schools, churches and other retail stores (Brown, Kaye-Blake & Payne, 2019). Carver (2021) outlined that the decline of religion and sporting clubs, coupled with new drink driving legislation were three events that lessened opportunities for communities to connect.

In 2014, a leading New Zealand economist, Shamubeel Eaqub, argued that small towns resembled places in the "Third World", with small towns becoming "zombie towns that need to close" (Nel et al., 2019). Aucklanders were compared to rural New Zealand as a "tale of two New Zealand's", with rural areas having struggling economies and populations (Nel et al., 2019). In 2017, the Maxim Institute predicted that 44 of the 67 territorial authorities would stop growing or decline (Maxim Institute, 2017). Conversely, some small towns are growing and have flourished with the intensification of farming and associated growth - these have benefited from globalisation, technological advances, leisure and economic opportunities from the disposable wealth available (Nel et al., 2019). While some areas are

not prepared for growth fuelled by retirement, tourism and new economic opportunities, others face structural decline, loss of jobs and migration (Nel et al., 2019). To enable any strong rural community, there needs to be a means to support each other, a place to connect, a common challenge and quality leadership (Carver, 2021).

9 Other issues facing rural communities

Farmers have encountered greater regulation, particularly since the 2017 election. Increased legislation has resulted in a focus on river water quality, an interest in where food comes from, the environmental footprint of agriculture, and animal care standards from urban contemporaries (Brown et al., 2019). Several policy initiatives, such as the One Billion Trees programme, have converted fertile and productive farmland into forestry. Some farms are now being converted to carbon farms for climate change; but this needs to be balanced against the loss of highly productive and fertile farmland, and the wider social impact on surrounding rural communities (TVNZ, 2022). An example of 28,000ha of sheep and beef stations being lost to carbon farming would result in almost \$20 million of expenditure not being spent in the local economy (Country Wide, 2022). The resulting impact on rural communities has led to families, contractors and related parties exiting communities. This migration affects the demand for educational, healthcare, banking, professional and governmental services - which already have struggling attendance. The loss of even one family can change classroom dynamics in a small rural school.

One metric states that, on average, there are 5,800 lifestyle blocks created per year (Chapman, 2021). Between 2002 and 2019, over 54% of highly productive land was converted to housing, as cities and towns sprawled by around a third in size (Chapman, 2021). Despite this, rural areas are projected to increase in population, with regions projected to grow more than minor and secondary urban areas up until 2038 (Health and Disability System Review, 2019).

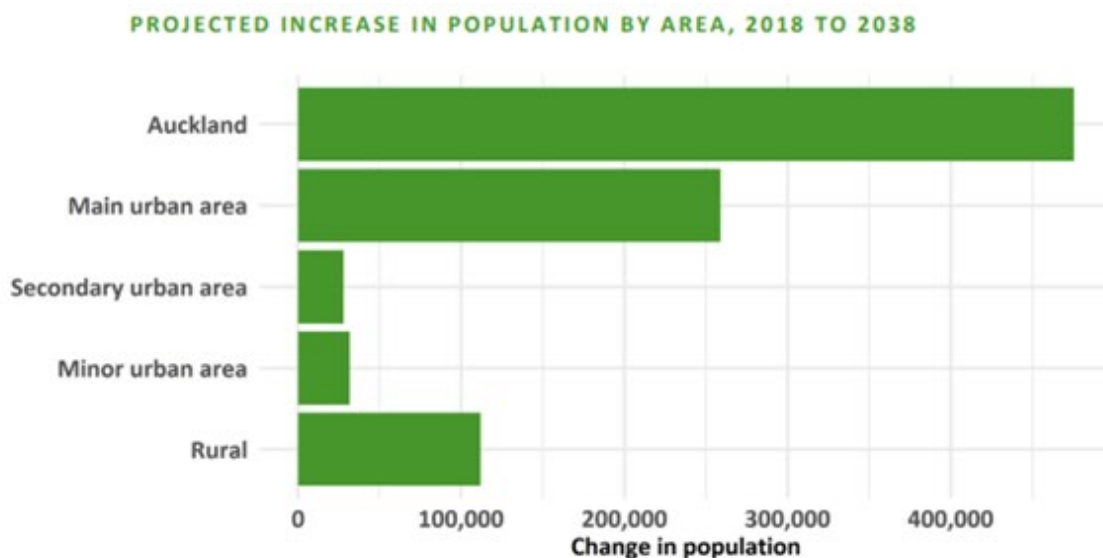


Figure 6: Projected increase in population by area, 2018 to 2038 (Source: Health and Disability System Review, 2019)

10 Importance of Primary Industries

Primary industries and the associated jobs derived from the food and fibre sector is vital to New Zealand's economy. It was estimated in 2014 that New Zealand's rural towns and communities (described as areas with less than 10,000 people) contained 420,000 jobs, included 140,000 businesses and generated over 25% of national GDP (Nel et al., 2019). Primary industry exports generated \$47.5 billion in the year ended June 2021 (accounting for 82% of trade, 11% of GDP and 14% of employment), with exports predicted to reach \$50.8 billion for the year ended June 2022 (Ministry for Primary Industries, 2021a; Ministry for Primary Industries, 2021b). New Zealand has the highest economic dependence on food and fibre production amongst nations that have developed economies, with food and fibre contributing to 77% of export earnings in the year ending June 2018 (Ministry of Primary Industries, 2021a). In a 2017 Ministry for Primary Industries study, there was a "strong sense that the primary sector was critical to the New Zealand economy", by generating employment opportunities and tax revenue (UMR, 2017). Dairy and milk consumption in New Zealand is steady or growing, particularly for urban New Zealanders, while cheaper meats like chicken are being replaced with quality red meat products (KPMG, 2021).

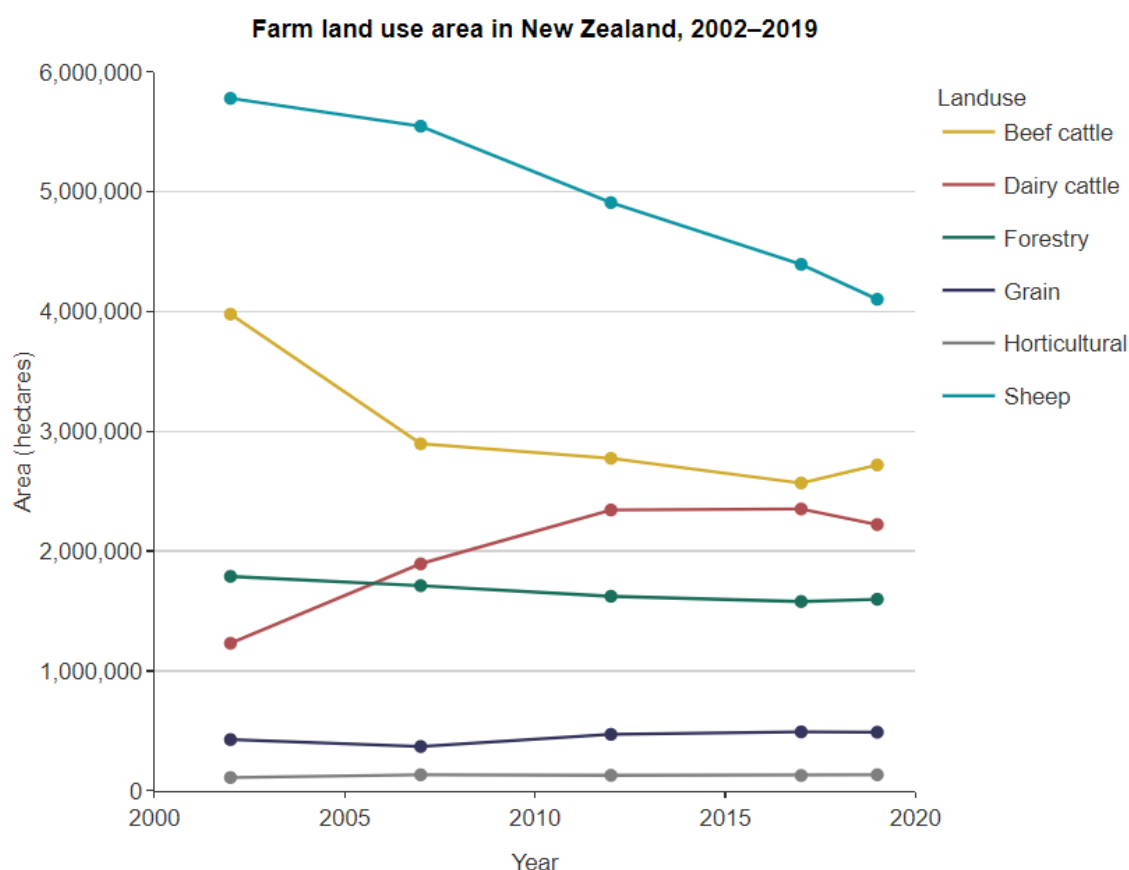


Figure 7: Farmland use area from 2002-2019 (Statistics New Zealand, 2021b)

However, between 2002 and 2019, the total land area in New Zealand containing farms has decreased from 15,589,885 to 13,561,175 hectares, with the total number of farms decreasing from 52,785 to 49,520 during this time (Statistics New Zealand, 2021c). In a 2019 survey, New Zealanders remained optimistic about horticulture and farming (Primary Purpose, 2021). There is a perception that the rural/urban divide is growing as people become more disconnected from the source of their food and fewer people have direct connections to farms (KPMG, 2021). Further research states there is little evidence of a

divide in views, and if it exists, it may not be as great as perceived (Ministry of Primary Industries, n.d.). In 2020, over 30% of the population were employed in the food and primary sectors; on-farm, in forest, at sea or in processing and support services (Ministry of Primary Industries, 2020a). It is clear that primary industries and rural communities need to be supported. Resilience for our rural communities depends on investment in information technology, roading, water systems, education and health to support agriculture and tourism (Brown et al., 2019).

Global population predictions will impact New Zealand. The UN Population Division expects the world population to increase from 7.7 billion in 2019 to 10.9 billion by 2100 (Roser, 2019). The UN, many governments and the private sector are looking for innovation to create scalable food production to avoid health and food crises around the globe – food production must increase by 70% to feed the global population by 2050 (Beef+Lamb, 2018). As this population grows, increased food demand will mean our agricultural industry becomes more critical to feeding the world.

11 New Zealand Government priorities

The government services provided within New Zealand are primarily driven by the Minister for Rural Communities, whose role is to ensure rural communities are resilient, able to thrive during challenges, and to offer a rural perspective in government decision-making (Department of the Prime Minister and Cabinet, 2021). The Government also uses 'rural proofing' to ensure that rural communities have a high quality of life, and equitable economic and social opportunities (Ministry for Primary Industries, n.d.).

In July 2020, the Ministry of Social Development (2020) reviewed New Zealand services for rural communities and adopted 'Heartland Services' and 'Information and Advisory Services' to support communities that face:

- A decreased NGO and government presence;
- Economic fortune based on weather events (including snow, drought and floods);
- Fluctuating farmgate prices;
- Limited professional support;
- Outdated information and communication systems;
- Limited accessibility due to travel/transport options; and
- Inconsistent reporting.

The Ministry of Primary Industries states that citizens living in rural communities face health care, education, infrastructure, and employment challenges (Ministry for Primary Industries, n.d.). Rural communities with lower population density are impacted by travel times to service centres and access to essential services (emergency services, educational and health facilities). Attracting and retaining staff and families in rural communities may be difficult if access to schools, preschools, sports groups, marae, churches, health and maternity facilities is restricted (Ministry of Primary Industries, n.d.). Due to limited public transportation options and less developed digital infrastructure, communities have limited opportunities to socialise or gain employment (Ministry of Primary Industries, n.d.). There are often concerns about inadequate housing, a lack of sporting facilities and a high number of fast food and alcohol outlets in rural towns (Brown et al., 2019). Isolation can impact an individual's physical and mental health and well-being, and lead to poorer life outcomes.

Five initiatives are recommended by the Ministry for Primary Industries (2021a) to be introduced to support rural communities, including establishing an Office of Rural Communities, building the capability of rural trusts, providing wellbeing support to the most vulnerable and hard to reach communities, establishing rural hubs and delivering services to assist with the response and recovery when adverse events occur.

A new government programme has created over 18 Rural Community Hubs across New Zealand with the purpose of:

- Building resilience from the impacts of COVID-19;
- Enhancing community cohesion;
- Facilitating employment pathways through adult literacy and driver education;
- Support through government-funded health and welfare assistance; and
- Social and community support networks to tackle challenges (New Zealand Government, 2021a).

The map below outlines where these rural community hubs are based. It will be interesting to monitor how these services react to the issues facing the rural communities they serve.



Figure 8: Rural Community Hubs (Source: New Zealand Government, 2021a)

12 Healthcare outcomes

12.1 Rural healthcare services

The main challenges that face rural New Zealanders are access to health services due to geographic isolation and a lack of support services in rural locations. People that live in remote communities experience significant disadvantages in their access to hospitals, clinics, specialist facilities and midwifery services due to geographic barriers (Disler, Glenister & Wright, 2020). In a 2020 review by the Health and Disability System, service delivery for rural areas is deemed “unacceptable” (New Zealand Rural General Practice Network, n.d.). Inequitable access to national health services can increase inequity in health outcomes for populations (Whitehead, Pearson, Lawrenson & Atatoa-Carr, 2020). The New Zealand Rural Health Alliance Aotearoa New Zealand (2019) outlines the following priorities which are critical to rural New Zealanders:

1. Worsening service accessibility in rural health workforces (including maternity, early childhood, whānau ora, medical and specialised services);
2. Importance of rural hospitals for the wellbeing and health of rural communities;
3. Reliable and safe maternity services for rural women;
4. Investment in mental health and wellbeing in the rural sector; and
5. Upgraded technology to improve rural health (broadband, medical equipment, Mobile Surgical Bus service).

In 2003, Public Health Intelligence compared the health of 13,000 people in urban and rural settings to assess risk factors, the use of services and the prevalence of chronic diseases between urban and rural dwellers (Ministry of Health, 2007). While urban dwellers were more likely to be diagnosed with heart disease, asthma, arthritis and osteoporosis, rural citizens were less likely to experience these outcomes. In 2010, life expectancy and other health status measures were similar between urban and rural populations, but the gap between the life expectancy of Māori and non-Māori populations exists in both rural and urban areas (National Health Committee, 2010; Health and Disability System Review, 2019). Rural Māori have higher morbidity and mortality rates than urban Māori, and are more likely to live in material and financial hardship than non-Māori (Health and Disability Sector Review, 2019).

In 2016, the Medical Council of New Zealand found that rural areas (defined as areas with less than 20 people per square kilometre) have fewer doctors per head of population (139.4/100,000) than urban areas (367.8/100,000), with the number of doctors working in general practice per head of the population being less (72.9/100,000) than in urban areas (95.0/100,000) (The Royal New Zealand College of General Practitioners, 2016). There is an “acute shortage” of medical practitioners in rural areas (Whitehead et al., 2020). Due to the isolation of rural health care workers, innovative approaches are needed, and a “School of Rural Health” is proposed to address challenges for the rural sector (Crampton & Baxter, 2018). The article cites it is a challenge in every country to distribute doctors in rural areas to improve healthcare quality to rural populations. Other rural health professionals per capita are unevenly distributed in rural areas compared to urban areas. In a 2019 survey, only 6.1% of medical graduates intended to work in communities of less than 25,000 citizens (New Zealand Medical Journal, 2019). 100-120 more general practitioners were required for sustainable and high-quality rural health services in New Zealand in a 2001 survey, and this number is estimated to be higher today (London, 2001).

Rural community health hubs were identified as an essential priority for New Zealand (New Zealand Rural General Practice Network, n.d.). Te Oranganui delivers a range of wellbeing support to the community also (Health and Disability System Review, 2019). One submission of the 2019 review stated:

“A success in 2030 would be those that live in rural areas of New Zealand do not have to travel hundreds of kilometres and countless hours to receive appropriate healthcare.” (p.189, Health and Disability Sector Review, 2019).

There are several publicly funded rural mobile health services available through primary health organisations, district health boards and rural hospitals, including:

- Mobile oral health clinics;
- Mobile breast-screening services;
- Mobile surgical services – offering day surgeries; and
- Psychiatric outreach services and community nurses.

(Ministry of Health, 2019a; National Health Committee, 2010).

Mobile surgery buses are fitted with digital interactive video equipment, and a national and international exchange of expertise for hospitals (National Health Committee, 2010). A National Travel Assistance scheme provides financial assistance for people travelling long

distances to get specialist care (Ministry of Health, 2019a). Several helplines and online support services are available, including Healthline, Kidshealth, Let's talk teeth, PlunketLine, Quitline and Alcohol Drug Helpline (Ministry of Health, 2019b). Further investigation is needed to determine if healthcare assistance via telephone or the internet provides the equivalent service as in-person delivery.

12.2 Plunket

A significant change to rural communities was the 2018 restructure of Plunket when 50 rural staff were made redundant in regional centres. This was described as “cutting roles to the most rural and vulnerable communities to have more people working out of centralised hubs which have never even been to those communities” (Stuff, 2018a). Plunket offers a key role in assisting babies' healthcare outcomes during pre-school years. The exit of many Plunket providers in rural areas has meant increased travel for mothers with young children and less contact time with Plunket nurses. Plunket has ignored the fundamental challenge that every new mother with a baby needs support, regardless of religion, socio-economic status and location. Since 2018 its focus has moved from being 'community wide' to only the most vulnerable. This change is another example of withdrawal of support for rural New Zealand.

12.3 Rural mental health

The nature of primary industries makes them susceptible to adverse events such as floods, drought, bovine tuberculosis or biosecurity incursions like *Mycoplasma Bovis* – and these can drastically impact farm profitability and have multiple flow-on effects on communities, including mental health implications (Ministry for Primary Industries, 2020a). Pressures in farming can be significant; including health and safety regulations, volatile pricing, weather, intense workload, high debt levels of farms, high staff turnover, isolation and government pressure (Carver, 2021). Mental health, domestic violence, gambling, crimes, drug use, poverty, gang membership and suicide were several social problems facing rural communities (Brown et al., 2019). The impact of the 2020 droughts was felt significantly by farmers, growers and surrounding communities, which reverberated across much of the country, and parts of the North Island experienced the driest summer and autumn in 50 years since records began (Ministry for Primary Industries, 2020b). The global dairy crisis in 2015/2016 led to a downturn in the dairy industry, and alongside droughts and floods in regions, there were increased suicide rates amongst farmers (Beautrais, 2017).

In positive news for rural mental health, the suicide rate has decreased for a second year, however a decline must be shown over a five-year period before a trend can be established (Office of the Chief Coroner, 2021). The difference in the rate of suicide between urban and rural citizens has decreased, with males in rural areas reducing from 26.6 per 100,000 in 2010, to below 20.0 per 100,000 since 2012 (Ministry of Health, 2020). In 2017, approximately 25% of suicides involved individuals under 25 years of age, and half were under the age of 40, with twice as many farm labourers as farm owners or managers (Beautrais, 2017). The suicide rate for young rural men decreased in 2015 from 54.4 per 100,000 to 15 per 100,000 however, in 2019, it was higher for males than females, for Māori rather than non-Māori and for people in rural areas (Newshub, 2019; New Zealand Rural General Practice Network, n.d.).

Farmstrong identifies the following wellbeing areas that can cause mental health challenges in rural areas: volatility of farming, sleep, work-life balance, social contact, exercise levels, contribution to the community, new learning and impacts of injury (Farmstrong, 2021). The 'Every Life Matters Suicide Prevention Strategy' (Ministry of Health, 2019b) has a list of initiatives for farmer and rural wellbeing:

- Farmstrong – national wellbeing programme for the rural community (www.farmstrong.co.nz);

- Rural MH101 Webinars – to develop the confidence to recognise, respond and relate to people that are experiencing mental health challenges;
- GoodYarn Farmer Wellness Workshops – workshops to farming colleagues and friends suffering from mental illness or stress (www.goodyarn.org); and
- Rural Support Trusts – facilitators offer confidential mental wellness support services (www.rural-support.org.nz).

Events like the Will to Live tour to 10,000 farmers across 18 rural towns also help support mental health (Will to Live Charitable Trust, 2021). The cost of mental health problems in rural communities impacts entire economies, including the cost to businesses, families, and taxpayers through health and welfare services, and intangible psychological and social costs to individuals, their families and communities (Goffin, 2014). An Iowa Farm and Rural Life Poll showed that farmers who experienced high stress were 1.7 times more likely to have a severe injury than their counterparts with low to moderate stress levels (Goffin, 2014). Engagement in family life and work are necessary for human existence, and social interaction resolves dilemmas, with rural areas generally having a higher rate of voluntary participation and community attachment (Goodrich & Sampson, 2008). The loss of employment opportunities, natural resources being exhausted, the exit of young and job seekers, falling birth rates, ageing population, and economic changes impact rural communities and community wellbeing (Nel et al., 2019). Relationships in rural areas have many close ties, with families being the building blocks of communities, and this support network is essential for wellbeing and health.

13 Policing in rural communities

Living in remote and isolated areas makes rural people vulnerable to crime. In 2006, 64 one-person police stations existed in rural areas, with officers expected to police vast areas often from one or two police stations (Mawby, 2010). By 2021, 94 communities had one or two-person police stations (Independent Police Conduct Authority, 2021a). High turnover of rural staff exists, and support can be distant while officers are stretched when absence and illness occur (Mawby, 2010). Neighbourhood Support, Community Patrols of New Zealand, Crimestoppers (an independent charity), and Local Councils assist rural areas (New Zealand Police, 2022).

Mawby (2010) identified that staff turnover is also an issue, with police officers giving the following feedback:

“We’ve had heaps. Some come and might stay for four or five years and then move on to get their promotions (Interview with Town Mayor in Central District).”

“There is a ‘Generation Y’ who prefer to be stationed in towns where the girls and pubs were. Rural service does not appeal to younger officers (Inspector A of Central District).” (p.101)

The recent Independent Police Conduct Authority (2021a) report also outlined this in police officer interviews:

“Essentially you seem to get involved in everything which can be a pain in the bum, but you seem to be the first call for most stuff. So if someone has a problem, even Animal Control problems, they ring us first and we’re generally having to say to people very politely: ‘You’ve actually rung the wrong person, we can’t deal with your wild pigs unless you want us to come out and shoot them after work.’” (p.15).

In November 2021, the Independent Police Conduct Authority reviewed policing in 12 small communities across the country to understand the challenges of policing in small communities and 41 recommendations were made (Independent Police Conduct Authority, 2021b). In the review, officers discussed workload, burnout, inadequate support and unsatisfactory police stations and houses (Independent Police Conduct Authority, 2021a). Most rural communities visited in the review had alcohol and drug issues – including drunk driving, family violence, theft, addiction to methamphetamine, illegal hunting and disorderly behaviour (Independent Police Conduct Authority, 2021a). A study conducted in 2010 found that rural policing had a more significant and stressful impact on police officers' lives and families, and this will be a focus for future policy making (Buttle, Fowler & Williams, 2010).

Key areas that the Police are working on addressing include:

- Further conflict of interest training in small communities;
- Consistent deployment terms;
- Comprehensive induction for small community positions;
- Better relief and supervision; and
- Improved access within communities and communication guidelines. (Independent Police Conduct Authority, 2021a).

Accompanying these changes to rural policing has been a noticeable increase in crime on farms. In 2021, the Federated Farmers of New Zealand (2021) surveyed over 1,200 farmers and 52% state they had been impacted by crime in the last two years, up 10% from a 2016 survey. Of the 52% surveyed, 71.4% had it occur two or more times, and 17.5% have had it happen five or more times (Federated Farmers of New Zealand, 2021). Federated Farmers outlined that theft of livestock, property, fuel, vehicle and tools along with wild game poaching, cannabis growing, methamphetamine manufacturing and beehive thefts were significant crimes on farms (Gibson & Kelsall, 2021). Methamphetamine usage in poor and rural areas is a concern, with some drug users taking the drug every day (Newshub, 2021). Interestingly, in 2013 a study found that when looking at crime based on area, people living in urban areas (26%) were more likely to be a victim of one or more offences than the New Zealand average (24%), while citizens living in rural areas (18%) or minor urban areas (18%) were less likely (The Ministry of Justice, 2020).

14 Education

Rural educational disadvantage exists in numerous countries, including inequalities in high school graduation rates, educational outcomes, and school experience. New Zealand has higher government expenditure (7.4%) on public education as a percentage of GDP in comparison to Australia (5.6%) and Canada (5.4%), however reading performance for children in rural regions is worse than towns and cities in New Zealand (Sullivan, McConney and Perry, 2018). Only 4% of students in rural areas have a university-educated parent compared to 30% in large cities (Sullivan et al., 2018). Education is discussed further in the case studies below. Initiatives such as the Virtual Learning Network have clusters of organisations that collaborate to enhance learning outcomes for schools via digital technology – they currently have 152 members (Virtual Learning Network, n.d.).

15 Employment in rural areas

In general, from 2001 to 2013, it was documented that rural areas have higher employment rates than urban, typically by 6 to 10 percent (Cochrane and Maré, 2017). For the last decade, the food and fibre industry has had a labour shortage (KPMG, 2021). A topical issue over the past two years since the advent of COVID-19 has been the shortage of seasonal and agricultural workers needed in the primary sector due to border closures. The

Rural Support Trust reports farmers are currently under significant stress with adverse events and workers standing down with the Omicron variant (Otago Daily Times, 2022). KPMG (2021) estimates that this rural contractor shortage could see 27 million tonnes of food wasted. Horticultural and agricultural sectors have become automated where viable, as RSE and seasonal labour has been difficult to obtain (Chapman, 2021).

A survey from DairyNZ and Federated Farmers noted 49% of farmers were short staffed, with 58% experiencing increased stress (KPMG, 2021). A severe vet shortage in rural communities is also noted in the KPMG Agribusiness Agenda. In general, the roles are there for employment if people are willing to work. Rural employment schemes like 'Think Rural', established by Local Government New Zealand's Mayor's Taskforce, aims to attract 1,150 young people to rural areas with sustainable employment (LGNZ, 2022). There are benefits of living in small, connected communities, including friendliness, volunteer mentality, and community spirit. Volunteerism participation examples in New Zealand include clubs such as Rotary International, Lions Club International, Meals on Wheels and Fire and Emergency New Zealand. Participation in charitable organisations is high in rural areas.

16 Services - other

16.1 Exit of retail banks

The closure of banks in rural towns around New Zealand has also been a topical subject in the media since the advent of COVID-19. The 'big five' banks closed 161 local branches and 299 ATMs over 18 months to June 2021, and this decision in some cases resulted in broader unemployment, mental health and socio-economic repercussions (Stuff, 2021b). Employment and job creation is fundamental to rural communities – jobs attract and retain people to any area (Brown et al., 2019).

While banking services have changed for many with the advent of online banking platforms, there were still widespread concerns for the elderly and for rural households which have limited accessibility to the internet. Mayors around the country petitioned the Government requesting a formal inquiry into bank closures in provincial communities citing grievances of "an area of nearly 3,000 sq./km without a single bank" (Newstalk ZB, 2021). Concerns were mainly raised about the elderly given challenges like arthritis in hands, hearing impairment and other limitations (Stuff, 2021c). Poor internet in rural areas and the removal of cheques as a payment method affected rural communities strongly (Stuff, 2021d). The New Zealand Bankers' Association is trying to remedy this situation by piloting Banking Hubs for essential banking services of the six central banks in Twizel, Martinborough, Stoke and Ōpunakē (KPMG, 2020). Hubs provide phone banking, an ATM and tablets for online banking, with support staff available to help customers use the service (Consumer NZ, 2021).

Banking and postal services are now often bundled together in rural communities. At present there is an invisible tax placed on individuals with rural delivery addresses, as letters and mail have a higher cost to these areas. To ensure that rural communities can receive goods, educational resources, and banking products in an equitable manner, it is proposed that rural levies on packages and postage to rural addresses be removed.

16.2 Rural Broadband Initiative

The lack of affordable, accessible high-speed digital connectivity is a significant issue for rural communities and a health and safety risk (KPMG, 2021). The Australian Farm Institute Conference identified interconnectedness via technology during COVID-19 as one of the keys to future trade in agricultural food exports (Beef Central, 2021). Equality of access to digital connectivity is vital for the sector, and has been accelerated as a priority with COVID19 (KPMG, 2021). Homes in remote parts of rural New Zealand, where wireless signals are blocked due to geography, and it is too expensive to install infrastructure, are being connected to the internet through the Rural Broadband Initiative (Sunday Star Times, 2018).

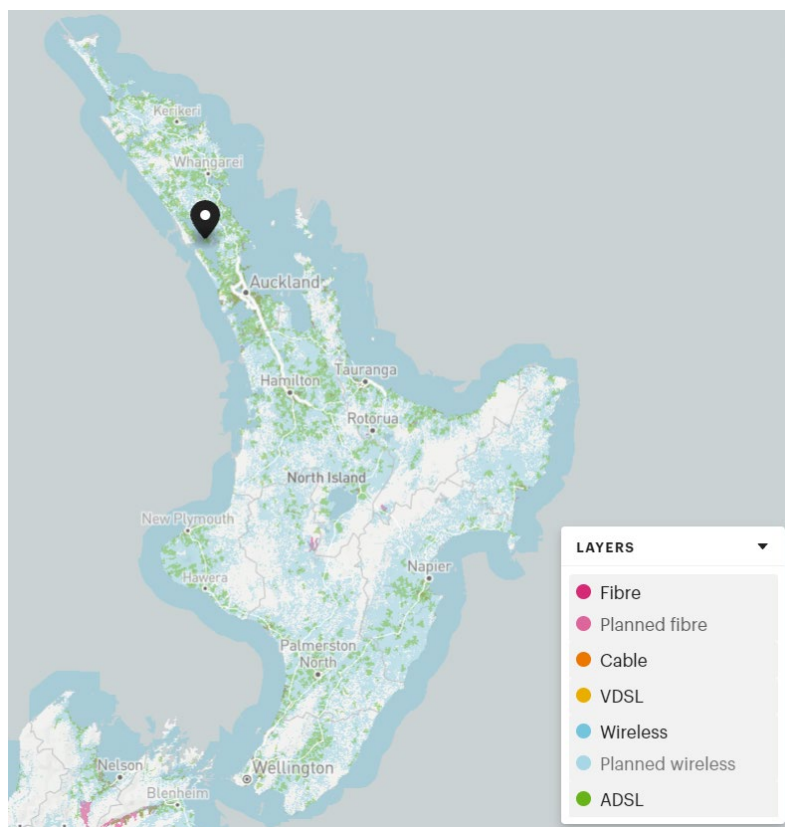


Figure 9: North Island map of broadband connectivity (Source: Broadband Map NZ, 2021)

Demand for digital services increased by 56% during lockdowns and was estimated to grow 40% during 2021 (Farmers Weekly, 2020). Rural communities need high quality and reliable mobile connectivity and broadband to:

- Attract and retain employees;
- Operate valuable businesses;
- Access health and social services;
- Maintain social connections;
- Use a range of services; and
- Access professional development and educational opportunities.

(Rural Health Alliance Aotearoa New Zealand, 2019)

Moves to boost rural cellular and broadband coverage was reinforced by Vodafone's investment in 70 additional cellular towers in more provincial towns (Farmers Weekly, 2022). The Rural Broadband Initiative intends to achieve 99.8% coverage by 2023, with 74% or

63,000 rural homes (including 271 maraes), and businesses receiving improved broadband from the programme and better mobile coverage (Ministry of Primary Industries, 2021a; Health and Disability System Review, 2019). Recently the government committed an additional \$47 million for 47,000 rural households and businesses to receive better reception and internet speed (Radio New Zealand, 2022; Farmers Weekly, 2022). This was after reports that connectivity was slow and patchy, with only 8% of 1,100 farmers saying their internet speed had improved (Feds News, 2021). During lockdowns, programmes from the government enabling children to loan devices or receive modems for broadband has helped improve connectivity, where available.

16.3 Events supporting communities

As the rural and urban divide widens in New Zealand, continuing communication between urban and rural communities is vital for bridging any gaps in understanding (Brown et al., 2019). Rural communities' problems require broad-based, multi-level, cross-sectoral leadership to generate solutions. Rural women in general face constraints to their male counterparts to access essential services and resources, market information, technology and financial assets (KPMG, 2021). Opportunities to connect at events are necessary for women. Events help educate urban dwellers about rural issues and the rural way of life.

Several events support rural communities to engage, support each other and build connections. Surfing for Farmers has been a recent initiative to support the rural sector. RuralFest is an annual event with 37 member representatives organised by Rural Health Alliance Aotearoa New Zealand to improve the health and wellbeing of rural communities to take messages from this event to Parliament (Pinnacle Incorporated, 2021). The event has led to a focus on mental health, a new definition of rurality in New Zealand, rural inequity in the health and disability review and increased rural midwifery funding.

The New Zealand Rural Games is New Zealand's largest rural sporting event that celebrates rural sport and showcases the positive benefits of rural life. Rural Women New Zealand (over 160 years old) provide annual business awards to champion the entrepreneurial spirit of rural women (Rural Women New Zealand, n.d.). Annual Young Farmers events do this too. These events inspire others and offer the opportunity to connect and celebrate success.

The North Island and South Island Agricultural Field Days give farmers and other members of the primary sector the opportunity to understand the latest developments in agricultural service and machinery available on the market, particularly local products. With the advent of COVID19, Fielddays was launched virtually and held online for over two weeks (KPMG, 2021). The South Island event attracts 20,000-25,000 visitors over three days, and the North Island event in the Waikato attracts over 130,000 visitors – with other Field Days held in Northland and Central Districts each year. The New Zealand Agricultural Show also attracts 100,000 visitors a year and has been held for over 150 years (The New Zealand Agricultural Show, 2022). In Katherine Gillespie's 2016 Kellogg Report, she noted rural communities needed conscious community, quality leadership and collaboration to develop their communities, and the above events provide the opportunity to do so (Gillespie, 2016).

16.4 Water & Energy

16.4.1 Three Waters Reform

Water quality issues are managed at present under the Resource Management Act and National Policy Statement on Freshwater Management. (Ministry for the Environment, 2021). In July 2020, the Government launched a proposal for reforming local government three water sources (drinking water, wastewater and stormwater infrastructure) to improve health outcomes for all communities. This will transfer \$54.6 billion in assets managed by 4,900 council staff (in 67 local authority suppliers, 16 regional councils and 20 district health boards) to 9,300 staff (New Zealand Government, 2021b). It was forecasted that for some small rural local authorities, average household costs could increase from \$1,300 to \$9,000 without reform (New Zealand Government, 2021b). Deloitte Access Economics (2021) estimates that most rural and provisional regions would benefit from the reform in relative terms, given they face large infrastructure deficits and would receive additional FTEs with job growth higher than the average in some rural areas.

Where existing service delivery arrangements between rural schemes and councils exist, the officials will work together to provide drinking water and stock water with mixed ownership (Department of Internal Affairs, n.d.). Taumata Arowai is working on practical and cost-effective compliance for small suppliers (Department of Internal Affairs, n.d.). Irrigation New Zealand also wanted to see Integrated Farm Plans and Farm Environment Plans used for water registering and mitigation as existing frameworks to ensure safe drinking water (The Country, 2021). The future will prove whether this reform is as beneficial to rural New Zealand communities as forecasted.

The stability of rural electricity networks is also a challenge to secure sustainable and cost-effective energy (KPMG, 2021). Future energy insecurity is an issue worth noting as we transition to a low carbon future in New Zealand.

16.5 Roothing infrastructure

In January 2020, the Hon Phil Twyford announced the transport infrastructure upgrades to “get New Zealand moving and prepared for the future” (New Zealand Government, 2020). This programme of work was summarised as:

- \$6.8 billion for transport infrastructure in six growth areas of Auckland, Waikato, Bay of Plenty, Canterbury, Wellington and Queenstown;
- \$1.1 billion for railways; and
- \$2.2 billion for new roading in Auckland.
(New Zealand Government, 2020).

On further investigation of the \$1.1 billion allocated to railways, it was noted this was allocated to upgrades in Auckland and Wellington only. Rural communities and food and fibre producers can feel aggrieved that they have not been supported in these initiatives. The geographic isolation of many rural communities means that quality roading infrastructure is needed to allow residents to commute easily to rural towns and other centres.

17 Case Studies

To understand if social outcomes are worse in rural communities than urban centres, the author investigates two 'rural' centres, Putāruru Rural and Taihape, and one forestry area, Pirongia Forest, to compare how these towns' outcomes in the 2018 New Zealand Census compare against national averages from 2006 to 2018.

18 Study One: Putāruru



Putāruru is located in rural Waikato between Tīrau and Tokoroa on State Highway 1, close to the Waikato River (South Waikato District Council, 2021a). It was settled in the 1890s to service local farmers and a large native logging industry, and in 2017 the town was noted as recently experiencing population growth (South Waikato District Council, 2021b).

The town is situated in the Taupō electorate, and is ranked 9 in the index of deprivation (Parliamentary Service, 2017a). The index of deprivation is a ranking for towns within New Zealand from 1-10 calculated by a variety of metrics (including income, access to transport, homeownership, living space, qualifications, employment status, access to telephone and government benefit support); and the higher the number on the index of Deprivation, the more "socioeconomically deprived an area is considered" to be (Parliamentary Service, 2017a; Ministry of Health, 2007).

18.1 Population

Population statistics in 'Putāruru Rural' show that the population has largely remained steady, with 2,238 citizens in 2006, 2,223 citizens in 2013 to 2,373 citizens in 2018 (Statistics New Zealand, 2018b).

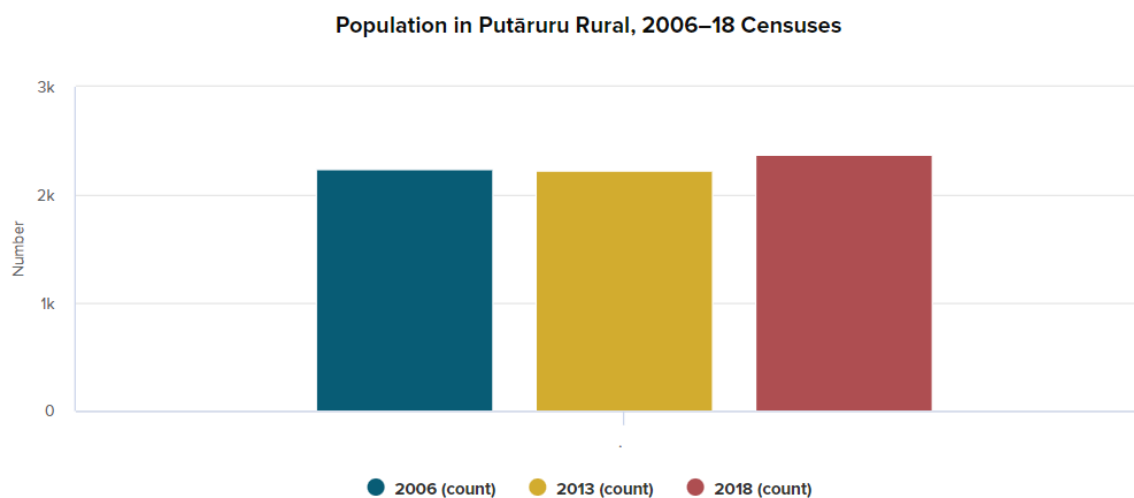


Figure 10: Population of Putāruru Rural, 2006- 2018 (Source: Statistics New Zealand, 2018b)

18.2 Education

Regarding educational opportunities, the number of citizens in Putāruru Rural with no qualifications has decreased from 30.3% in 2006 to 21.5% in 2018 (Statistics New Zealand, 2018b). Nationally only 18.6% of New Zealanders over 15 had no qualification (Parliamentary Service, 2017a).

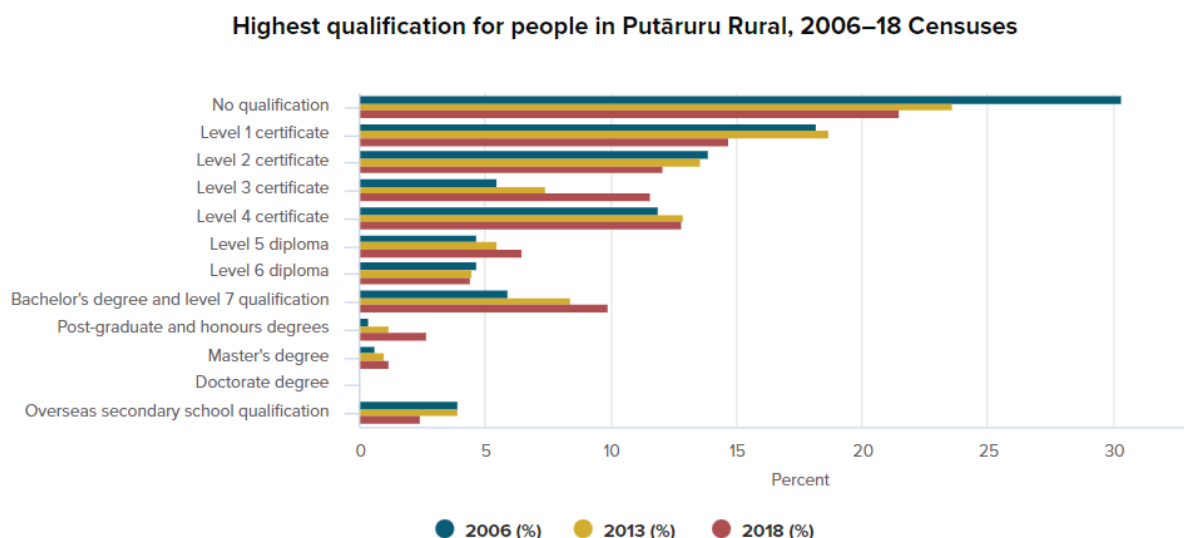


Figure 11: Highest qualification in Putāruru Rural 2006-2018 (Source: Statistics NZ, 2018b)

18.3 Employment

Work and labour force status for people in Putāruru Rural, 2006–18 Censuses

Category	2006 (%)	2013 (%)	2018 (%)
Employed full-time	57.9	57.4	54
Employed part-time	17.2	15.4	18.3
Unemployed	2.3	2.9	2.5
Not in the labour force	22.6	24.4	25.2

Figure 12: Work and labour force status in Putāruru Rural, 2006-2018 (Source: Statistics New Zealand, 2018b)

The statistics relating to employment show that the number of citizens in Putāruru Rural employed full-time decreased from 57.9% in 2006 to 54% in 2018, and those defined as unemployed increased slightly from 2.3% in 2006 to 2.5% in 2018 (Statistics New Zealand, 2018b).

18.4 Commentary on other services – Policing, Healthcare and Banking

Since this report was begun, the Putāruru Police Station has temporarily closed, after being open from Monday to Friday from 8 am – 4 pm (New Zealand Police, 2021). The town now has no banks, as Westpac and BNZ closed in the town in 2016, ANZ in 2021 and Kiwibank in 2022 (Stuff, 2018b; Stuff, 2021c). The local Council owns the Plaza Theatre, outdoor pools, the Putāruru library and The Plaza to provide community activities, education, and

events (South Waikato District Council, 2020). There are four doctors based in Putāruru, which service both Putāruru and Tīrau.

While there is limited data on the health outcomes of Putāruru residents, it was acknowledged that accessibility was easier in Hamilton than in rural areas of Putāruru, which has “poor access to GP services” (Whitehead et al., 2020). Most services (secondary, tertiary and specialists) are only accessed by travelling to Hamilton to use the Waikato Hospital (Whitehead et al., 2020).

Figure 13: Summary - 2018 Census Data - Putāruru Rural compared to national averages (Source: Statistics New Zealand, 2018b; Statistics New Zealand, 2018c)

	Putāruru Rural (2018)	National average (2018)	Better/worse than national average
Median age	35.7 years	37.4 years	-
Māori median age	24.0 years	25.4 years	-
Employed full-time	54.0%	50.1%	Better
Unemployed	2.5%	4.0%	Better
Median income	\$38,300	\$31,800	Better
Over \$70,000	17.1%	17.2%	Worse
No qualification	21.5%	18.2%	Worse
Bachelor's degree and level 7 qualification	9.9%	14.6%	Worse
Drive a private vehicle to work	41.5%	57.8%	Worse
Main dwelling not owned and not held in a family trust	37.9%	35.5%	Worse
Median weekly rent	\$170	\$340	Better
Regular smokers	14.3%	13.2%	Worse
Activity limitations for walking, seeing, hearing, communication	5.1%	6.5%	Better
No access to basic amenities	0.4%	0.4%	-
Proportion of homes sometimes damp	23.8%	18.5%	Worse
Proportion of homes sometimes has mould over an A4 sheet of paper	14.9%	12.6%	Worse
Access to internet	84.2%	86.1%	Worse
Access to cellphone/mobile phone	91.5%	91.9%	Worse

In summary, in 2018, all metrics are worse than national averages in Putāruru Rural except full-time employment, unemployment, median income, median weekly rent and proportion of the population with activity limitations. 'No access to basic amenities' is deemed equal.

19 Study Two: Taihape



The rural town of Taihape is located on State Highway 1 in the Central North Island and was established to provide a hub to service rural communities (Robertson, 1995). It is situated in the Rangitikei electorate, and has a deprivation index of 8 (Parliamentary Services, 2017b).

19.1 Population

The population of Taihape in 2018 was 1,716 and has remained relatively stable from the 1,839 citizens that there were in the town from 2006 (Parliamentary Service, 2017b). While Taihape could be defined as a “small urban area” from the New Zealand Statistics definition, as data is not always available for towns under 1,000 citizens and this town predominantly supports primary industries, this report will classify this town as “rural”.

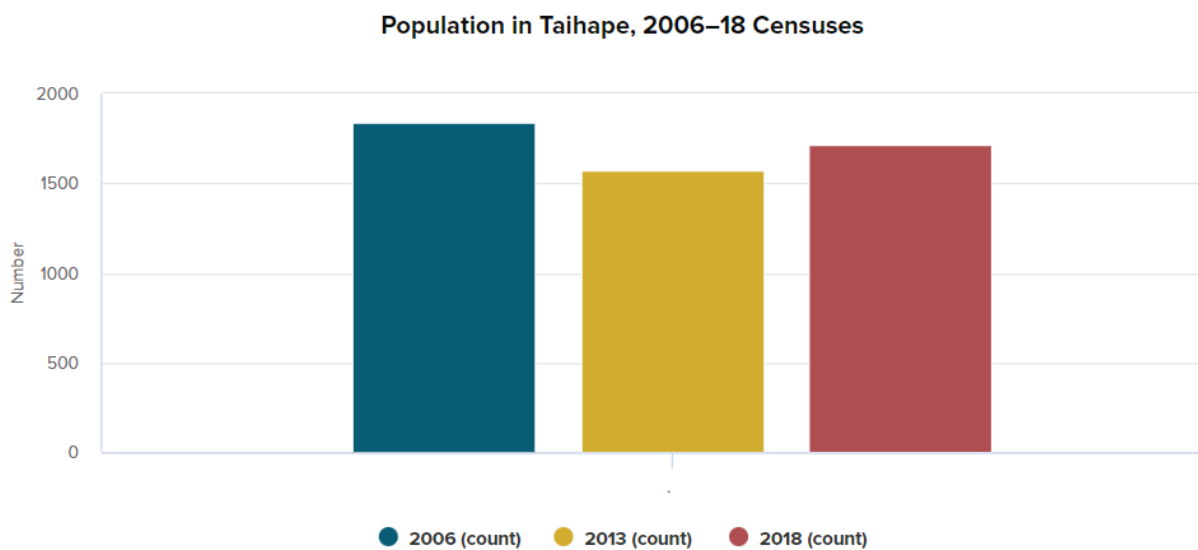


Figure 14: Population in Taihape, 2006-2018 (Source: Statistics New Zealand, 2018d)

19.2 Education

The Taihape Area School (the local high school) has around 250⁵ students on the roll, with 59% of whom identify as Māori (Education Review Office, 2021c; Google, 2014). In 2017, 33% of Year 13 students achieved University Entrance, 89% achieved Year 13 Level 3, 100% achieved Year 12 Level 2 and 97% achieved Year 11 Level 1 (Education Central, 2018). In these statistics, only 38% of Year 13 students attempted University Entrance, and only 37% of Year 13 students attempted NCEA Level 3 (Education Central, 2018).

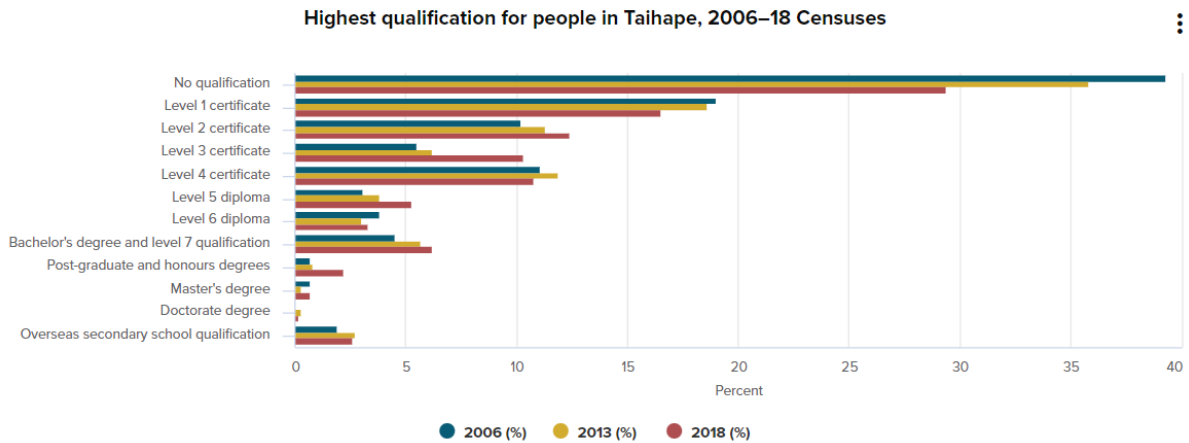


Figure 15: Highest qualification in Taihape, 2006-2018 (Source: Statistics NZ, 2018d)

When assessing the proportion of residents that have no qualification, the trend has reduced from 39.3% in 2006 to 29.4% in 2018 (Statistics New Zealand, 2018d). However, this is lower than the national average of 23.7% having no qualification (Parliamentary Services, 2017b). Statistics reflecting the number of residents that have a Bachelor's degree (6.2%) in comparison to the national average (6.9%) are similar (Statistics New Zealand, 2017; Parliamentary Services, 2017b).

19.3 Employment

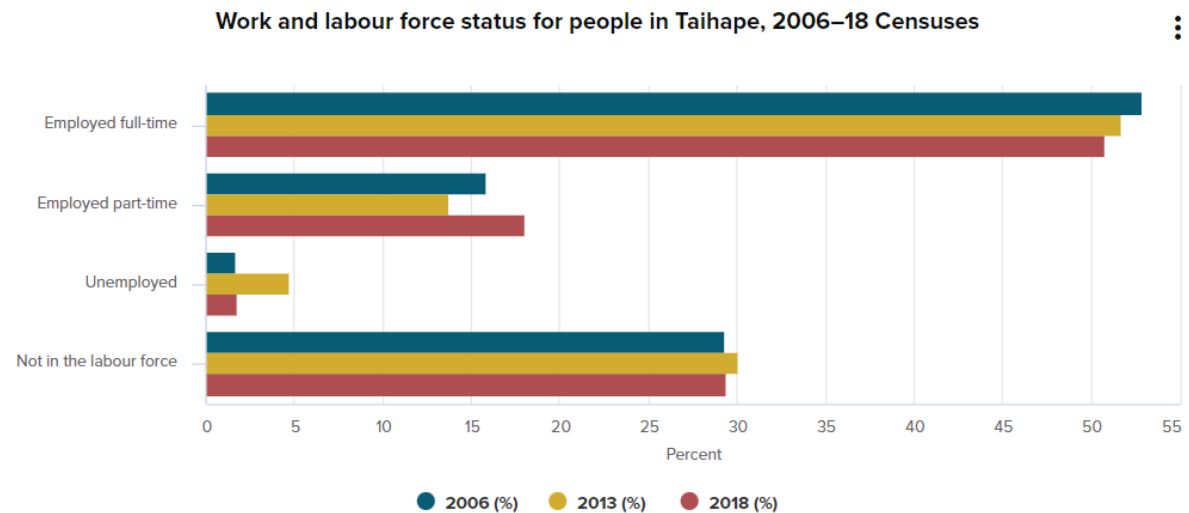


Figure 16: Work and labour force status in Taihape, 2006-2018 (Source: Statistics NZ, 2018d)

Employment statistics show that 50.8% of the workforce were employed full-time in 2018, with unemployment fluctuating from 1.7% in 2006, to 4.7% in 2013 and then to 1.8% in 2018 (Statistics, 2017). People not in the labour force have remained steady at approximately 29% during the 12 years of statistics. Taihape's unemployment statistics are much lower

⁵ In 2018 Taihape Area School had a school roll of 253 students (Education Review Office, 2021c).

than the national average of 4.0% unemployment nationwide. Statistically, Taihape residents have a higher proportion of full-time employment than the national average of 46.0% (Parliamentary Services, 2017b).

Whilst citizens are statistically employed at a more significant proportion in Taihape than nationally, the highest proportion of citizens (13.6%) earn \$15,001-\$20,000, which is lower than the national median personal income of \$28,500 (Statistics, 2017; Parliamentary Services, 2017b). This concludes that whilst more people are employed proportionally, they earn less than their national counterparts. It is noteworthy that median incomes are often overstated, and unemployment rates are underestimated in rural communities (Brown et al., 2019).

19.4 Commentary on other services – Policing, Healthcare and Banking

There is one police station in Taihape. The closest hospital, MidCentral District Health Board Palmerston North Hospital, is 118 kilometres away from Moawhango. The local hospital, Otaihape hospital, in the Taihape township, closed in 2010 (Sunday Star Times, 2010). Taihape now has a medical centre with 2.5 EFT (equivalent full time) doctors, which service 4,000 patients from the surrounding community (Manawatu Standard, 2021). At the time of writing, Westpac is the only remaining retail bank in Taihape, following the closure of ANZ Bank in 2016, and BNZ in 2020 (Wanganui Chronicle, 2016; Radio New Zealand, 2020). Since the 1960s, several stores and services have also closed including a railway workshop, railway station, post office, hardware store, George Edwards clothing store, Taihape saleyards, McSweenys clothing store, the IGA store, Naylor's bookstore, Elders, Farmers Co-Op, Hautapu Motors, Ward Motors, Taihape Auto, Taihape Times (the local newspaper), the Returned Servicemen Association, Infields the chemist and photographic services. The Taihape Hotel was also burned down and not replaced. The exit of these businesses and stores has impacted the local community and people who drive through the town and use its services.

Figure 17: Summary - 2018 Census Data - Taihape compared to national averages (Source: Statistics New Zealand, 2018d; Statistics New Zealand, 2018c)

	Taihape (2018)	National average (2018)	Better/worse than national average
Median age	40.2 years	37.4 years	-
Māori median age	28.2 years	25.4 years	-
Employed full-time	50.8%	50.1%	Better
Unemployed	1.8%	4.0%	Better
Median income	\$27,100	\$31,800	Worse
Over \$70,000	10.7%	17.2%	Worse
No qualification	29.4%	18.2%	Worse
Bachelor's degree and level 7 qualification	6.2%	14.6%	Worse
Drive a private vehicle to work	53.4%	57.8%	Worse
Main dwelling not owned and not held in a family trust	33.8%	35.5%	Better
Median weekly rent	\$180	\$340	Better
Regular smokers	26.3%	13.2%	Worse
Activity limitations for walking, seeing, hearing, communication	8.6%	6.5%	Worse
No access to basic amenities	0.5%	0.4%	Worse
Proportion of homes sometimes damp	12.2%	18.5%	Better
Proportion of homes sometimes has mould over an A4 sheet of paper	14.9%	12.6%	Worse
Access to internet	72.5%	86.1%	Worse
Access to cellphone/mobile phone	89.7%	91.9%	Worse

In summary, in 2018, all metrics were worse than national averages in Taihape except full-time employment, unemployment, house ownership, median weekly rent and proportion of homes which are 'sometimes damp'.

20 Study Three: Pirongia Forest

To briefly provide a final case study on an area that may give an insight into the future of regions impacted by carbon farming, this case study also looks at the location of Pirongia Forest. The site is deemed “rural” as it has under 1,000 residents, and in 2018, 966 people resided there (Statistics New Zealand, 2018e). The area is based in the Ōtorohanga District, a local economy primarily based on sheep, beef and dairy farming, with the Pirongia Forest area predominantly in forestry (Ōtorohanga District Council, 2022). Māori makes up 47% of the population (Statistics New Zealand, 2018e). The site is in the Taranaki King Country electorate, and has an Index of Deprivation of 10 (Parliamentary Service, 2021).

The boundary of this area is in blue below:

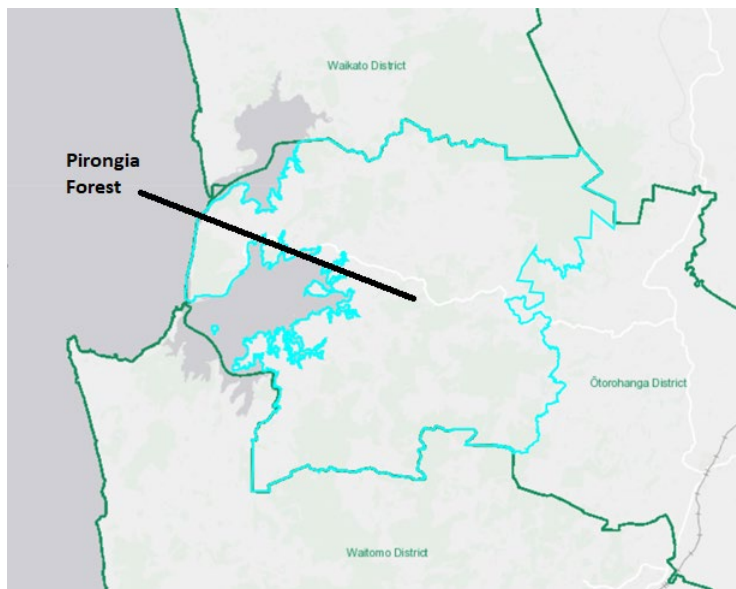


Figure 18: ‘Pirongia Forest’ Map (Source: Statistics New Zealand, 2018e)

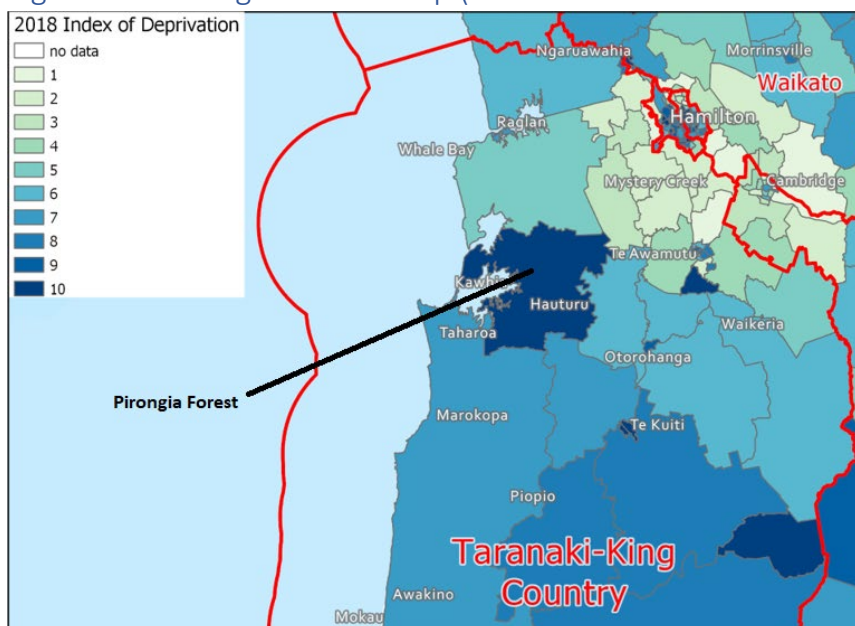


Figure 19: ‘Pirongia Forest’ on the Deprivation Index (Parliamentary Service, 2021)

Figure 20: Summary - 2018 Census Data - Pirongia Forest compared to national averages (Source: Statistics New Zealand, 2018e; Statistics New Zealand, 2018c)

	Pirongia Forest (2018)	National average (2018)	Better/worse than national average
Median age	50.5 years	37.4 years	-
Māori median age	37.4 years	25.4 years	-
Employed full-time	34.7%	50.1%	Worse
Unemployed	5.0%	4.0%	Worse
Median income	\$19,700	\$31,800	Worse
Over \$70,000	7.7%	17.2%	Worse
No qualification	35.5%	18.2%	Worse
Bachelor's degree and level 7 qualification	6.9%	14.6%	Worse
Drive a private vehicle to work	43.3%	57.8%	Worse
Main dwelling not owned and not held in a family trust	29.0%	35.5%	Better
Median weekly rent	\$150	\$340	Better
Regular smokers	22.4%	13.2%	Worse
Activity limitations for walking, seeing, hearing, communication	9.9%	6.5%	Worse
No access to basic amenities	0.0%	0.4%	Better
Proportion of homes sometimes damp	24.3%	18.5%	Worse
Proportion of homes sometimes has mould over an A4 sheet of paper	16.5%	12.6%	Worse
Access to internet	58.6%	86.1%	Worse
Access to cellphone/mobile phone	81.9%	91.9%	Worse

All socio-economic measures are worse except access to amenities, rent and house ownership. Unlike the other rural case studies, employment and median income are significantly worse in this forestry area. After reviewing the above 2018 metrics, the author recommends that the social and economic impacts to communities of carbon farming be further investigated and monitored by Central Government.

21 In brief – International Focus

21.1 Australia

Australia also faces issues relating to distance and isolation, with many remote and rural communities having large ageing populations (65 years and above) and populations of Aboriginal and Torres Strait Islanders (Australian Bureau of Statistics, 2002). The following are problems identified by Government for rural communities:

- Mental health care and access to services (The Australian Government Department of Health, 2006);
- Access to community services (The Australian Government Department of Health, 2006);
- Barriers to travel, transport and accommodation for health care (The Australian Government Department of Health, 2021);
- Job and educational opportunities (notably higher education), poverty and geographic disadvantage;
- Exit of banks, medical professionals, withdrawal of government services, business closures, income disparity (Senate Community Affairs References Committee, 2004);
- COVID-19 relief and recovery; and
- Recovery from bushfires, droughts and floods.

There is targeted funding, bonding agreements and incentives to support health professionals in rural Australia (Austrian Government Department of Health, 2021). Access to education, health, housing and transport in rural communities is a priority for the Government (Senate Community Affairs References Committee, 2004)

21.2 Canada

In Canada, the government focuses on access to improved roading and infrastructure, clean drinking water, affordable housing and reliable and fast internet (Government of Canada, 2021). Other priorities include climate change, skills and labour, tourism and adaptation.

21.3 United States of America

The USA faces similar rural education and healthcare issues focusing on demographic changes, broadband access, workforce development, capital access, land use, and community preservation needed to support a robust rural economy (National Conference of State Legislatures, 2020).

21.4 European Union

The European Union has a vision for rural areas to create connected, robust, resilient and prosperous rural communities by 2040 (European Commission, 2021). One flagship initiative is a 'one-stop shop' website for rural communities, authorities and project holders to collaborate and develop projects to become an innovative place to live and reside (European Commission, 2021). In the 2020 barometer survey (European Commission, 2020), the critical issues identified include:

- High-speed internet access;
- Access to cultural and leisure activities and transport connecting to cities; and
- Educational facilities, health services and employment opportunities.

22 Conclusions

The success of rural communities in New Zealand is vital to our nation's economic and social fabric. The world's population is forecasted to increase from 7.7 billion in 2019 to 10.9 billion in 2100, and New Zealand's role in feeding the world is pivotal. The food and fibre sector is vital to New Zealand's economy – the sector accounted for 82% of trade, 11% of GDP and 14% of employment as at June 2021. New Zealand has the highest dependence on this sector compared to any other developed nation.

Rural New Zealand was a very different place in the 1930s from what we experience today, and the 'hollowing out' of services has occurred in many rural towns. Once vibrant rural towns have watched as banks, government departments, hospitals, police stations, courts, schools and churches have downsized or closed. As rural communities are isolated, citizens often have barriers to travel and access to healthcare, telecommunications, services, education, eldercare and childcare.

Events such as the removal of farm subsidies in 1984-5, the 1987 global stock market crash and the 1997 Asian financial crisis have all impacted the decline of rural communities. Farms amalgamated to remain economical, dairy factories and sale yards consolidated resources, meat-processing plants closed, and government agencies relocated to larger areas. These events, coupled with overbearing rural building restrictions, unsatisfactory roading, limited job opportunities for rural wives, poor communication, inadequate school bus services and poor satellite reception, impacted historic rural-urban migration. Urbanisation increased globally over the past 100 years, and Auckland and 12 territorial authorities enjoyed 90% of national population growth between 1996-2013. The Māori population changed from being 83% rural to 83% urban between 1936 and 1986. By 2014 however, a prominent New Zealand economist stated rural towns resemble the "third world" as "zombie towns that need to close".

Rural areas often have higher employment rates than urban areas. Skill shortages in horticulture and agriculture have been documented for the past decade. The exit of young and job seekers, a falling birth rate, ageing population and economic changes have impacted regional areas. With the recent surge of COVID-19 Omicron cases, employers and owners now have to account for time out of work in recovery for themselves, their staff and their families in addition to labour and contracting shortages. Retail banks have exited provincial areas and the loss of jobs at 161 closed branches has been felt. There is momentum for an inquiry into the removal of banking services from regional New Zealand. It is yet to be determined how this will impact the elderly and impaired.

Rural communities experience similar health outcomes to their urban counterparts – however, accessibility, socioeconomic deprivation, doctors per head of population, and "acute shortages" are issues to address. Urban dwellers are comparatively more likely to experience asthma, heart disease, arthritis and osteoporosis than rural residents. In positive news for mental health, the national rate of suicide has decreased for a second year, a tribute to the 'Every Life Matters' prevention strategy.

Rural educational disadvantage exists, particularly for higher qualifications, but there is little difference between lower school achievement and national averages. Provided there are educational opportunities available, the case studies show that unemployment and rents are lower in rural centres, homeownership is higher, some health outcomes are better, and the benefit of less air and noise pollution affects health and wellbeing positively. Rural communities thrive with quality leadership, conscious community, collaboration and development opportunities. Events such as RuralFest, The Boma Agri Summit, Fielddays, the National Agricultural Show and Rural Games offer opportunities for the sector to bond and connect.

Police in rural areas have high staff turnover, limited support in absence and illness, some stations have reduced hours or have closed, and others have inadequate stations or facilities. Farm crime has increased in the last two years, and the ability to access the internet and maintain cellphone coverage is still lagging behind urban centres. The percentage of individuals earning higher salaries in rural communities is less, and individuals in these areas often have lower 'highest qualifications'. Methamphetamine and smoking use are higher in rural areas. The three case studies also found that homes' 'sometimes damp' standards were worse in rural areas than national averages.

Increased e-commerce provides more opportunities than ever to reside rurally and exit living in the city. Connectivity is a key to future trade in agricultural food exports. Over half of our landmass is used in forestry and agriculture, with a third in native forest and conservation land. As some of our most prized endangered flora and fauna, our Great Walks and many national parks and significant natural areas occur in rural New Zealand, there is much to love about residing and working outside an urban centre. Provided New Zealand can protect its most fertile and productive land for horticulture and agriculture, there are great opportunities for the food and fibre sector to meet global demand for food, provide employment and a healthy environment to live in.

Rural communities must draw upon their leadership, resilience and social capital to combat the challenges of less access to services, and improve the quality of life for many rural communities. Our rural towns depend on investment in rural connectivity, water, electricity networks, roading, education, healthcare and policing to support the food and fibre sector. Central Government must make the future an opportunity.

23 References and list of contributors

- AgResearch. (2021). *How Māori Agribusiness is Leading Aotearoa's Farming Future*. Retrieved from <https://ourlandandwater.nz/news/how-maori-agribusiness-is-leading-aotearoas-farming-future/#:~:text=M%C4%81ori%20own%20%2413%20billion%20in,wealth%20creation%2C%20and%20cultural%20revitalisation.>
- Australian Bureau of Statistics. (2002). Population, population distribution. *Australia Now Series*. ABS, Canberra.
- Australian Government Department of Health. (2006). *Rural and remote communities*. Retrieved from <https://www1.health.gov.au/internet/publications/publishing.nsf/Content/mental-pubs-p-mono-toc~mental-pubs-p-mono-pop~mental-pubs-p-mono-pop-rur>
- Australian Government Department of Health. (2021). *Stronger Rural Health Strategy*. Retrieved from <https://www.health.gov.au/health-topics/rural-health-workforce/stronger-rural-health-strategy>
- Beautrais, A. L. (2018). Farm suicides in New Zealand, 2007–2015: A review of coroners' records. *Australian & New Zealand Journal of Psychiatry*, 52(1), 78-86.
- Beef Central. (2021). *Ag marketers must adapt to range of new drivers coming into international trading world*. Retrieved from https://www.beefcentral.com/trade/ag-marketers-need-to-adapt-to-range-of-new-drivers-coming-into-play-in-the-international-trading-world/?utm_medium=email&utm_campaign=Beef%20Central%20News%20Headlines%20June%202022%202021&utm_content=Beef%20Central%20News%20Headlines%20June%2022%202021+CID_7f46a6c8d25cd9bb73f969b32438f2a0&utm_source=eGenerator&utm_term=Ag%20marketers%20must%20adapt%20to%20range%20of%20new%20drivers%20coming%20into%20international%20trading%20world
- Beef+Lamb. (2018). *Future of Meat: How should New Zealand's Red Meat Sector respond to Alternative Protein advancements?* Retrieved from <https://beeflambnz.com/sites/default/files/levies/files/Alternative%20Proteins%20summary%20Report.pdf>
- Broadband Map NZ. (2021). *National Broadband Coverage Map*. Retrieved from <https://broadbandmap.nz/availability/-35.96724461065994/-171.3444109837566?address>
- Brown, M., Kaye-Blake, B., & Payne, P. (2019). *Heartland Strong. How rural New Zealand can change and thrive*. Auckland: Massey University Press.
- Buttle, J., Fowler, C., & Williams, M. W. (2010). The impact of rural policing on the private lives of New Zealand police officers. *International Journal of Police Science & Management*, 12(4), 596-606.
- Campbell, H. (2021). *Divided they fall: NZ's complex farming future*. Retrieved from <https://www.newsroom.co.nz/ideasroom/divided-they-fall-nzs-complex-farming-future>
- Carver, D. (2021). *Leadership & Rural Communities*. [PowerPoint] Lincoln University. Retrieved from <https://app.slack.com/>
- Chakravarthy, K., Charters, F., & Cochrane, T. A. (2019). The impact of urbanisation on New Zealand freshwater quality. *Policy Quarterly*, 15(3).
- Chapman, M. (June 2021). *Kellogg leadership presentation*. [PowerPoint] Lincoln University. Retrieved from <https://app.slack.com/>
- Christchurch City Library. (n.d.). *Cyclone Bola*. Retrieved from <https://my.christchurchcitylibraries.com/cyclone-bola/>
- Cochrane, W & Maré, D. (2017). Urban influence and population change in New Zealand. *Policy Quarterly*; Vol. 13 (2017): Policy Quarterly
- Consumer NZ. (2021). *Bank branch closures: are banking hubs the answer?* Retrieved from <https://www.consumer.org.nz/articles/bank-branch-closures-are-banking-hubs-the-answer>

- Coöperatieve Rabobank U.A. (New Zealand Branch). (2021). *Waipukurau*. Retrieved from <https://www.rabobank.co.nz/office/north-island/waipukurau/>
- Country Wide. (2022). *Gisborne farm consultant Peter Andrew protests the move to carbon forestry in his region*. Retrieved from https://nzfarmlife.co.nz/guilt-trees-destroying-farming/?mc_cid=3073b312f9&mc_eid=b78890f557
- Crampton, P., & Baxter, J. (2018). Rural matters. *The New Zealand Medical Journal (Online)*, 131(1485), 6-7.
- Deloitte Access Economics. (2021). *Industry Development Study and Economic Impact Assessment*. Retrieved from [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/deloitte-report-industry-development-study-&-economic-impact-assessment.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/deloitte-report-industry-development-study-&-economic-impact-assessment.pdf)
- Department of Internal Affairs. (2008). *Sustainable Urban Development – Setting the Scene*. Retrieved from https://www.dia.govt.nz/diawebsite.nsf/wpg_URL/Resource-material-Sustainable-Urban-Development-Setting-the-Scene?OpenDocument
- Department of Internal Affairs. (n.d.). *Three Waters Reform: key questions, essential facts*. Retrieved from <https://www.dia.govt.nz/three-waters-reform-programme-frequently-asked-questions#rural-schemes>
- Department of the Prime Minister and Cabinet. (2021). *Ministerial Portfolio – Rural Communities*. Retrieved from <https://dpmc.govt.nz/cabinet/portfolios/rural-communities>
- Derby, M. (2011). 'Māori–Pākehā relations - Māori urban migration', *Te Ara - the Encyclopaedia of New Zealand*
- Disler, R., Glenister, K., & Wright, J. (2020). Rural chronic disease research patterns in the United Kingdom, United States, Canada, Australia and New Zealand: a systematic integrative review. *BMC Public Health*, 20(1), 1-7.
- Doig, W. (1940). A survey of standards of life of New Zealand dairy-farmers. DSIR Bulletin 75. Wellington, New Zealand: Department of Scientific and Industrial Research.
- Dominion Post. (2019). *Four years on and no sign of development on Waipukurau's former hospital site*. Retrieved from <https://www.stuff.co.nz/dominion-post/news/hawkes-bay/115111086/four-years-on-and-no-sign-of-development-on-waipukuraus-former-hospital-site>
- Education Central. (2018). *NCEA results: See how your school rates*. Retrieved from https://educationcentral.co.nz/_trashed-3/
- Education Review Office. (2017). *Central Hawkes Bay College*. Retrieved from <https://ero.govt.nz/institution/233/central-hawkes-bay-college>
- Education Review Office. (2021a). *Moawhango School*. Retrieved from <https://ero.govt.nz/institution/2401/moawhango-school>
- Education Review Office. (2021b). *Takapau School*. Retrieved from <https://ero.govt.nz/institution/2684/takapau-school>
- Education Review Office. (2021c). *Taihape Area School*. Retrieved from <https://ero.govt.nz/institution/549/taihape-area-school>
- Environmental Health Intelligence New Zealand. (2018). *Urban-rural profile*. Retrieved from <https://www.ehinz.ac.nz/indicators/population-vulnerability/urbanrural-profile/>
- European Commission. (2020). Special Eurobarometer survey 504. Retrieved from <https://europa.eu/eurobarometer/surveys/detail/2229>
- European Commission. (2021). *A long-term vision for the EU's rural areas*. Retrieved from https://ec.europa.eu/info/strategy/priorities-2019-2024/new-push-european-democracy/long-term-vision-rural-areas_en

- Farmers Weekly. (2020). *More work ahead for rural broadband*. Retrieved from <https://farmersweekly.co.nz/s/fw-article/more-work-ahead-for-rural-broadband-MCGTNZAD57YZGWFILFXOCGCFOJGQ>
- Farmers Weekly. (2022). Rural broadband gets much-needed boost. *Farmers Weekly*. 20, 7. February 28, 2022
- Farmstrong. (2021). *Annual Results 2021*. Retrieved from https://farmstrong.co.nz/wp-content/uploads/2021/09/Infographic_Annual_Results_2021.pdf
- Federated Farmers of New Zealand. (n.d.). *Rural Communities*. Retrieved from https://www.fedfarm.org.nz/FFPublic/Policy2/National/Rural_Communities.aspx
- Federated Farmers of New Zealand. (2021). *Rural crime on the rise for Kiwi farmers*. Retrieved from <https://www.fedsnews.co.nz/rural-crime-on-the-rise-for-kiwi-farmers/>
- Feds News. (2021). *Survey reveals ongoing connectivity frustration*. Federated Farmers of New Zealand. September 2021.
- Gibson, L., & Kelsall, E., (2021). *Federated Farmers and NZ Police 2021 Rural Security Survey*. Retrieved from <https://storymaps.arcgis.com/stories/bd381b42987f4dfa9224f97a29b57925>
- Gillespie, K., (2016). *What makes a strong rural community?* Kellogg Rural Leadership Report. Lincoln University
- Goffin, A. (2014). *Farmers' mental health: A review of the literature*. Retrieved from <https://www.acc.co.nz/assets/research/dcaf5b4e0d/farmer-mental-health-review.pdf>
- Goodrich, C., & Sampson, K. (2008). *Strengthening rural families: an exploration of industry transformation, community and social capital*. Families Commission
- Google. (2014). *High School NCEA Ranking in 2011*. Retrieved from <http://school.speakingsame.com/nztopschool.php?type=2>
- Government of Canada. (2021). *The Centre for Rural Economic Development*. Retrieved from <https://www.infrastructure.gc.ca/rural/cenred-eng.html#strat>
- Gravity Internet. (2020). *FAQs about Rural Broadband*. Retrieved from https://getgravity.nz/broadband-plans/?keyword_k=%2Brural%20%2Bbroadband%20%2Bnz&qclid=CjwKCAjw-sqKBhBjEiwAVaQ9a7wwwK_JfegM4YMT5Ek_M6RuqDX1A8oS7l-PK2gILBWNitEw46pGgBoCa_UQAvD_BwE
- Hawkes Bay Today. (2020). *Waipukurau Westpac bank to close before Christmas*. Retrieved from <https://www.nzherald.co.nz/hawkes-bay-today/news/waipukurau-westpac-bank-to-close-before-christmas/KRRE6GS3SC5WSCCQ7JPMGV2LKI/>
- Health and Disability System Review. (2019). *Health and Disability System Review - Interim Report*. Hauora Manaaki ki Aotearoa Whānui – Pūrongo mō Tēnei Wā. Wellington: HDSR.
- Independent Police Conduct Authority. (2021a). *Thematic Review: Policing in small communities*. Wellington
- Independent Police Conduct Authority. (2021b). *IPCA release thematic review of policing in small communities*. Retrieved from <https://www.ipca.govt.nz/Site/publications-and-media/2021-media-releases/2021-nov-04-policing-small-communities-review.aspx>
- Jackson, N., & Brabyn, L. (2017). *The mechanisms of subnational population growth and decline in New Zealand 1976-2013*. Policy quarterly, 13.
- KPMG. (2020). *Financial Institutions Performance Survey Banks – Review of 2020*. Retrieved from <https://assets.kpmg/content/dam/kpmg/nz/pdf/2021/02/fips-banks-2020-interactive.pdf>
- KPMG. (2021). *Agri business Agenda 2021*. Retrieved from <https://home.kpmg/nz/en/home/industries/agribusiness/agribusiness-agenda.html>

- LGNZ. (2022). *Push for young city folk to think rural*. Retrieved from <https://www.lgnz.co.nz/news-and-media/2021-media-releases/push-for-young-city-folk-to-think-rural/>
- London, M. (2001). *Rural General Practitioner Recruitment and Retention in New Zealand* Centre for Rural Health: Christchurch, New Zealand.
- Manawatu Standard. (2021). *Taihape health centre to move into old hospital*. Retrieved from <https://www.stuff.co.nz/manawatu-standard/news/300362951/taihape-health-centre-to-move-into-old-hospital>
- Mawby. (2010). *Rural Policing and Policing the Rural: A Constable Countryside?* Routledge. <https://doi.org/10.4324/9781315607191>
- Maxim Institute. (2017). *Growing Beyond Growth: Rethinking the goals of regional development in New Zealand*. Retrieved from <https://www.maxim.org.nz/article/growing-beyond-growth/>
- Ministry for the Environment. (2021). *National policy statement for freshwater management*. Retrieved from <https://environment.govt.nz/acts-and-regulations/national-policy-statements/national-policy-statement-freshwater-management/>
- Ministry of Education. (2015). *Decile ratings 2015 – Ministry of Education*. Retrieved from <https://www.education.govt.nz/assets/Documents/School/Running-a-school/Resourcing/DecileChanges18June2015Review.xls>
- Ministry of Education. (2021). *School deciles*. Retrieved from <https://www.education.govt.nz/school/funding-and-financials/resourcing/operational-funding/school-decile-ratings/>
- Ministry of Health. (2007). *Urban-Rural Health Comparisons: Key results of the 2002/03 New Zealand Health Survey*. Wellington: Ministry of Health
- Ministry of Health. (2019a). *Rural health*. Retrieved from <https://www.health.govt.nz/our-work/populations/rural-health>
- Ministry of Health. (2019b). *Every Life Matters – He Tapu te Oranga o ia tangata: Suicide Prevention Strategy 2019–2029 and Suicide Prevention Action Plan 2019–2024 for Aotearoa New Zealand*. Wellington: Ministry of Health.
- Ministry of Health. (2020). *Suicide Facts: Data tables 1996 - 2016*. Retrieved from <https://www.health.govt.nz/publication/suicide-facts-data-tables-19962016>
- Ministry of Health. (2021). *Mātātuhi Tuawhenua: Health of Rural Māori 2012*. Wellington: Ministry of Health
- Ministry for Primary Industries. (2020a). *Rural Communities/Hapori Taiwhenua Portfolio Briefing 2020*. Retrieved from https://ndhadeliver.natlib.govt.nz/delivery/DeliveryManagerServlet?dps_pid=IE61702652
- Ministry for Primary Industries. (2020b). *Situation and Outlook for Primary Industries – June 2020*. Retrieved from https://www.beehive.govt.nz/sites/default/files/2020-12/SOPI%20December%202020_0.pdf
- Ministry for Primary Industries. (2021a). *Fit for a Better World – 2021 Progress Update*. Retrieved from <https://www.mpi.govt.nz/dmsdocument/45445-Fit-for-a-better-world-2021-progress-update>
- Ministry for Primary Industries. (2021b). *Situation and Outlook for Primary Industries – June 2021*. Retrieved from <https://www.mpi.govt.nz/resources-and-forms/economic-intelligence/situation-and-outlook-for-primary-industries/>
- Ministry for Primary Industries. (2021c). *Situation and Outlook for Primary Industries – December 2021*. Retrieved from <https://www.mpi.govt.nz/dmsdocument/49066-Situation-and-Outlook-for-Primary-Industries-SOPI-December-2021>
- Ministry for Primary Industries. (n.d.). *Rural proofing: guidance for policymakers*. Retrieved from <https://www.mpi.govt.nz/legal/rural-proofing-guidance-for-policymakers/>

- Ministry of Social Development. (2020). *Heartland Services & Information and Advisory Services: The current state*. Retrieved from <https://www.msd.govt.nz/documents/what-we-can-do/community/rural-communities/heartland-services-information-and-advisory-services-current-state-report-october-2020.pdf>
- National Conference of State Legislatures. (2020). *Challenges Facing Rural Communities*. Retrieved from <https://www.ncsl.org/research/agriculture-and-rural-development/challenges-facing-rural-communities.aspx#:~:text=Rural%20communities%20face%20challenges%20related,and%20environment%20and%20community%20preservation.>
- Nel, E., Connelly, S., & Stevenson, T. (2019). New Zealand's small town transition: The experience of demographic and economic change and place based responses. *New Zealand Geographer*, 75(3), 163-176.
- New Zealand Government. (2020). Transport infrastructure upgrades to get NZ moving and prepared for the future. Retrieved from <https://www.beehive.govt.nz/release/transport-infrastructure-upgrades-get-nz-moving-and-prepared-future>
- New Zealand Government. (2021a). *Rural Community Hubs*. Retrieved from <https://www.mpi.govt.nz/dmsdocument/44335-Rural-Community-Hubs>
- New Zealand Government. (2021b). *Transforming the system for delivering three waters services*. Retrieved from [https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/\\$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf)
- New Zealand Rural General Practice Network. (n.d.). *Spotlight on rural health sector in interim Health and Disability System Review*. Retrieved from <https://rgpn.org.nz/spotlight-on-rural-health-sector-in-interim-health-and-disability-system-review/>
- New Zealand Medical Journal. (2019). *Few New Zealand medical students intend to work in rural areas*. Retrieved from <https://journal.nzma.org.nz/journal-articles/few-new-zealand-medical-students-intend-to-work-in-rural-areas>
- New Zealand Police. (2021). *Putāruru Police Station*. Retrieved from <https://www.police.govt.nz/contact-us/station/putaruru-police-station>
- New Zealand Police. (2022). *Rural hub: Useful resources*. Retrieved from <https://www.police.govt.nz/advice-services/personal-community-safety/rural-hub/useful-resources>
- Newshub. (2019). *The rural demographic that's shown a sharp drop in suicides*. Retrieved from <https://www.newshub.co.nz/home/politics/2019/12/the-rural-demographic-that-s-shown-a-sharp-drop-in-suicides.html>
- Newshub. (2021). *Meth use higher in small towns, cocaine and ecstasy use higher in cities – study*. Retrieved from <https://www.newshub.co.nz/home/new-zealand/2021/06/meth-use-higher-in-small-towns-cocaine-and-ecstasy-use-higher-in-cities-study.html>
- Newstalk ZB. (2021). *Mayors across the country call for inquiry into bank closures*. Retrieved from <https://www.newstalkzb.co.nz/on-air/mike-hosking-breakfast/audio/alex-beijen-south-wairarapa-mayor-on-his-letter-to-the-pm-calling-for-inquiry-into-bank-closures/>
- Office of the Chief Coroner. (2021). *Chief Coroner releases annual suicide statistics*. Retrieved from <https://coronialservices.justice.govt.nz/assets/Uploads/Chief-Coroner-releases-annual-suicide-statistics-launches-new-web-tool-with-Ministry-of-Health2.pdf>
- Otago Daily Times. (2022). *Reach out for help if you need it, trust leaders say*. Retrieved from <https://www.odt.co.nz/rural-life/rural-life-other/reach-out-help-if-you-need-it-trust-leaders-say>
- Ōtorohanga District Council. (2022). *About Us*. Retrieved from <https://www.otodc.govt.nz/our-district/about-us/>
- Parliamentary Service. (2017a). *Electorate Profile: Taupō*. Parliamentary Library

- Parliamentary Service. (2017b). Electorate Profile: Rangitikei. Parliamentary Library
- Parliamentary Service. (2021). Electorate Profile: Taranaki-King Country. Parliamentary Library
- Pinnacle Incorporated. (2021). *RuralFest 2021 outcomes*. Retrieved from <https://www.pinnaclepractices.co.nz/news/ruralfest-2021/>
- Pollock, K. (2015). *Hawkes Bay places – Waipukurau*. Retrieved from <https://teara.govt.nz/en/hawkes-bay-places/page-6>
- Pomeroy, A. (2019). Insights from past and present social science literature on the (unequal) development of New Zealand's rural communities. *New Zealand Geographer*, 75(3), 204-215.
- Pomeroy, A. (2021). Reframing the rural experience in Aotearoa New Zealand: Incorporating the voices of the marginalised. *Journal of Sociology*, (Special Issue: Transforming Rural Futures), 1–17. doi:10.1177/14407833211014262
- Primary Purpose. (2021). *Public opinions of Primary Industries*. [PowerPoint] Lincoln University. Retrieved from <https://app.slack.com/>
- Radio New Zealand. (2020). *BNZ set to close 38 branches*. Retrieved from <https://www.rnz.co.nz/news/business/430984/bnz-set-to-close-38-branches>
- Radio New Zealand. (2022). *Govt to fund rural broadband network upgrades*. Retrieved from <https://www.rnz.co.nz/news/country/462118/govt-to-fund-rural-broadband-network-upgrades>
- Robertson, D. (1995). 1894-2010 “...give me TAIHAPE on a Saturday night”.
- Roser, M. (2019). *Future Population Growth*. Retrieved from <https://ourworldindata.org/future-population-growth>
- Rural Health Alliance Aotearoa New Zealand. (2019). *RHAANZ Rural Health Road Map 2019*. Retrieved from <https://rhaanz.org.nz/wp-content/uploads/2019/11/Rural-Health-Road-Map-2019.pdf>
- Rural Women New Zealand. (n.d.). *Our Events: Ā Mātou Hui*. Retrieved from <https://ruralwomennz.nz/events/>
- Senate Community Affairs References Committee. (2004). *A hand up not a hand out: Renewing the fight against poverty: Report on Poverty and Financial Hardship*.
- South Waikato District Council. (2020). *Annual Report 2019-20 year 2 of the LONG TERM PLAN 2018-28*. Retrieved from <https://www.southwaikato.govt.nz/repository/libraries/id:24rtvarkd17q9s3wxfn/hierarchy/our-council/strategies-plans-policies-bylaws/documents/Signed%20Annual%20Report%202019-20%20small.pdf>
- South Waikato District Council. (2021a). *Putāruru*. Retrieved from <https://www.southwaikato.govt.nz/our-district/living-here/putaruru>
- South Waikato District Council. (2021b). *Operative District Plan April 2021*. Retrieved from <https://plans.southwaikato.govt.nz/public/district-plan/DPLAN04.aspx#c4h4.1>
- Statista. (2021). *New Zealand: Unemployment rate from 1999 to 2020*. Retrieved from <https://www.statista.com/statistics/375266/unemployment-rate-in-new-zealand/>
- Statistics New Zealand. (2013). *2013 Census QuickStats about a place: Moawhango*. Retrieved from http://nzdotstat.stats.govt.nz/wbos/Index.aspx?_ga=2.200847398.927464278.1631573788-871233761.1631573788
- Statistics New Zealand. (2018a). *Waipukurau East*. Retrieved from <https://www.stats.govt.nz/tools/2018-census-place-summaries/waipukurau-east>
- Statistics New Zealand. (2018b). *Putāruru Rural*. Retrieved from <https://www.stats.govt.nz/tools/2018-census-place-summaries/putaruru-rural#work-income-and-unpaid-activities>

- Statistics New Zealand. (2018c). *New Zealand*. Retrieved from <https://www.stats.govt.nz/tools/2018-census-place-summaries/new-zealand>
- Statistics New Zealand. (2018d). *Taihape*. Retrieved from <https://www.stats.govt.nz/tools/2018-census-place-summaries/taihape>
- Statistics New Zealand. (2018e). *Pirongia Forest*. Retrieved from <https://www.stats.govt.nz/tools/2018-census-place-summaries/pirongia-forest>
- Statistics New Zealand. (2018f) *Review of 2018 statistical geographies*. Retrieved from <https://www.stats.govt.nz/consultations/review-of-2018-statistical-geographies>
- Statistics New Zealand. (2020). *Urban accessibility – methodology and classification*. Retrieved from <https://www.stats.govt.nz/assets/Uploads/Methods/Urban-accessibility-methodology-and-classification/Download-document/Urban-accessibility-methodology-and-classification.pdf>
- Statistics New Zealand. (2021a). *Subnational population estimates*. Retrieved from <https://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7979>
- Statistics New Zealand. (2021b). *Agricultural and horticultural land use*. Retrieved from <https://www.stats.govt.nz/indicators/agricultural-and-horticultural-land-use>
- Statistics New Zealand. (2021c). *Farm numbers and size*. Retrieved from <https://www.stats.govt.nz/indicators/farm-numbers-and-size>
- Stuff. (2018a). *More than 50 central region Plunket staff face redundancy*. Retrieved from <https://www.stuff.co.nz/business/100907216/over-50-jobs-are-expected-to-be-made-redundant-in-coming-months>
- Stuff. (2018b). *Waikato town loses its only ATM*. Retrieved from <https://www.stuff.co.nz/business/106040672/waikato-town-loses-its-only-atm>
- Stuff. (2021a). *Kiwibank branch closures expected, but still devastating for smaller towns*. Retrieved from <https://www.stuff.co.nz/business/124670012/kiwibank-branch-closures-expected-but-still-devastating-for-smaller-towns>
- Stuff. (2021b). *Big banks close more than 460 ATMs and bank branches over 18 months*. Retrieved from <https://www.stuff.co.nz/business/125505747/big-banks-close-more-than-460-atms-and-bank-branches-over-18-months>
- Stuff. (2021c). *More bank closures expected to hit rural Waikato towns*. Retrieved from <https://www.stuff.co.nz/business/money/300347929/more-bank-closures-expected-to-hit-rural-waikato-towns>
- Stuff. (2021d). *Banks running out of credit with fed-up rural communities as branch closures continue*. Retrieved from <https://www.stuff.co.nz/business/124498315/banks-running-out-of-credit-with-fedup-rural-communities-as-branch-closures-continue?rm=a>
- Sullivan, K., McConney, A., & Perry, L. B. (2018). A comparison of rural educational disadvantage in Australia, Canada, and New Zealand using OECD's PISA. *Sage Open*, 8(4), 2158244018805791.
- Sunday Star Times. (2010). *No town for old men*. Retrieved from <https://www.stuff.co.nz/sunday-star-times/features/4493448/No-town-for-old-men>
- Sunday Star Times. (2018). *Rural internet rollout won't reach remote pockets of New Zealand*. Retrieved from <https://www.stuff.co.nz/technology/104214289/rural-internet-rollout-wont-reach-remote-pockets-of-new-zealand>
- The Convention on Biological Diversity. (n.d.). *New Zealand: Removal of agricultural and fisheries subsidies*. Retrieved from <https://www.cbd.int/doc/case-studies/inc/cs-inc-newzealand-technical-en.pdf>
- The Country. (2021). *Three Waters proposals not unfair on farmers – Irrigation NZ*. Retrieved from <https://www.nzherald.co.nz/the-country/news/three-waters-proposals-not-unfair-on-farmers-irrigation-nz/N3UK2J7NUL7B14LBX3O5SICK3A/>

- The Ministry of Justice. (2020). *Who experiences crime?* Retrieved from <https://www.justice.govt.nz/justice-sector-policy/research-data/nzcass/survey-results/who-experiences-crime/>
- The New Zealand Agricultural Show. (2022). *History of the Show*. Retrieved from <https://www.theshow.co.nz/about-the-show/show-background/>
- The Royal New Zealand College of General Practitioners. (2016) Rural General Practice in 2015: education, recruitment, retention and standards. Wellington: The Royal New Zealand College of General Practitioners
- The Virtual Learning Network. (n.d.). *The VLN Community – Home of the Learning Communities Online (LCO)*. Retrieved from <https://vln.school.nz/groups/profile/572/vln-community/>
- Thorns, D. & Schrader, B. (2022). 'City history and people - The appeal of city life', Te Ara - the Encyclopedia of New Zealand. Retrieved from <http://www.TeAra.govt.nz/en/graph/23509/urban-growth>
- TVNZ. (2022). *Multi-billion-dollar carbon farming industry rises in NZ*. Retrieved from <https://www.1news.co.nz/2022/02/20/multi-billion-dollar-carbon-farming-industry-rises-in-nz/>
- UMR. (2017). *New Zealanders' views of the primary sector*. Retrieved from <https://www.mpi.govt.nz/dmsdocument/27582/direct>
- Wanganui Chronicle. (2016). *ANZ branch closure a blow for Taihape*. Retrieved from <https://www.nzherald.co.nz/whanganui-chronicle/news/anz-branch-closure-a-blow-for-taihape/CQQXXD4W6PIYCOEFGUMGCFI2FE/>
- Whitehead, J., Pearson, A. L., Lawrenson, R., & Atatoa-Carr, P. (2020). 'We're trying to heal, you know?' A mixed methods analysis of the spatial equity of General Practitioner services in the Waikato District Health Board region. *New Zealand Population Review*, 46, 4–35.
- Will to Live Charitable Trust. (2021). *2019 Speak Up Tour*. Retrieved from <https://www.willtolivenz.com/speak-up-tour>
- World Bank. (2020). *New Zealand – Rural Population*. Retrieved from <https://tradingeconomics.com/new-zealand/rural-population-percent-of-total-population-wb-data.html>