

BISHOP'S ACTION FOUNDATION

REPORT THREE

Rural Social Research Seminar Proceedings

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and

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Disclaimer:

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PREFACE

Agri-economic and agri-socio research is well established within New Zealand academic institutions. Much of the work is world-class and cutting edge which has led to additional information and expertise being made available to the agricultural industry. There remains a gap, however, in academic research and public policy discourse around rural communities that are not agriculturally based. The social deprivation present in rural towns and their surrounding areas is evident and is manifested in issues such as poor quality housing and little provision for young people so that petty crime and vandalism occur and many empty shop and business premises exist. There is established experience of poor healthcare provision for rural communities, in addition to poor provision of other public services.

There is an urgent need to understand rural communities and to provide high quality research and statistical evidence that can be used to improve their circumstances. The potential outcomes from better understanding our rural communities are significant and the funds targeting growth within our regions now available through a partnership with government provides potential resourcing for these opportunities if we can develop our understanding of what is needed. A long-term research focus located in a dedicated rural research institute would make a significant contribution to this goal.

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SECTION 1: INTRODUCTION

Background to the BAF report series

This is the third report in a series sponsored by the Taranaki Bishop's Action Foundation. The series aims to build understanding of the changes occurring in rural in New Zealand, with particular attention to the Taranaki region.

The first report in this series was funded by the TSB Community Trust. It was a 'desk' analysis based predominantly on census data (derived from Statistics New Zealand's area unit data) for each of the rural districts, rural centres, and minor urban areas which make up the three territorial authorities within Taranaki. Where possible additional information was added. While the information used is publicly available, the analysis has not been undertaken previously.

In the second report, area unit data from the census was again used to compare Taranaki's rural districts, rural centres and minor urban areas with those in seven other territorial authorities. Emphasis was on population change, age structure, work force and industry engagement (including comparing the industry engagement of people who work in each area against that of people who reside there), unpaid work, education, income, deprivation, ethnicity, and access to the internet, cell-phones and motor vehicles. The report provided an opportunity to see what these ten territorial authorities conveyed about rural New Zealand, as well as providing the Bishop's Action Foundation with a comparison of their rural constituents with others in like locations. The analysis included maps generated by Chris Garden (Department of Geography, University of Otago).

This report, the third in the series, is sponsored by the New Zealand Geographic Society and Massey University's School of People, Environment and Planning. Initially it was intended to include a contextual section tracking the progress of social research on New Zealand's rural communities since the 1900s, as a background to the seminar presentations. Unfortunately, the time it is taking to provide this background context has led us to split this report into two parts. This document is now just the proceedings of the seminar held in February 2017, that is, a summary of current research on rural New Zealand from a social perspective, plus updates since the seminar. The context /background will appear in a fourth report. It will include a review of research literature on farm, rural and small-town communities, people and living conditions.

New Zealand Rural Studies Group Seminar

Rural research in New Zealand has been a stop – start affair. Over time there have been many seminars to draw attention to rural issues and to build understanding of rural conditions. The seminar held on 2 February 2017 was effectively more of the same. Its specific purpose was to discuss rural social research currently in progress and to assess potential interest in the formation of a Rural Studies Group. Sponsored by the New Zealand Geographical Society and supported by the Taranaki Bishops Action Foundation, the seminar brought together people with an interest in rural social issues in New Zealand, offered an opportunity for people conducting rural social research to document their current research, and for users or potential users of that research to identify needs and gaps.

The range of disciplines represented included agricultural economics, agricultural sociology, rural sociology, political science, health science, anthropology, geography, planning, education, and history. Institutions represented included the Universities of Otago, Lincoln, Canterbury, Massey, Waikato, Auckland, and the Auckland University of Technology. Crown Research Institutes included AgResearch,

SCION, and LandCare. Officials and elected Local Government members attended. Non-government organisations included the Cawthron Institute, the Rural General Practice Network, the Rural Health Alliance Aotearoa New Zealand, Rural Women, the (Taranaki) Bishop's Action Foundation (BAF), and the New Zealand Geographical Society.

Outline of Report Three

In addition to the research statements from those who attended the seminar, several people unable to attend provided outlines of their current research interests and this is included in Section 2.

Section 3 summarises the concerns of users of rural social research: local government, health service providers and practitioners, and organisations concerned with the wellbeing of rural people and the effective delivery of social services to rural communities.

Section 4 begins the work of identifying possible and proposed further actions.

The annex includes a list of those who attended the seminar, or who were invited but unable to attend.

Some Definitions

Rural areas in New Zealand are defined by Statistics New Zealand as the residual territory outside population centres of 1,000 or more people. Other countries define rural as areas outside population centres of 10,000 or more people. This analysis of rural New Zealand uses the latter definition as the starting point to understand how rural New Zealand looks today and how it has changed over the past three decades. This rationale is based on an analysis of rural New Zealand using area unit data from the 2013 census undertaken for BAF. Starting with Taranaki it became clear that it made sense to include minor urban areas (centres with a population of 1,000 to 9,999 people), since these areas are key service hubs for their rural catchments. They also provide critical employment opportunities.

Other settlement definitions as established by Statistics New Zealand (Stats NZ) prior to 2018 include:

Minor urban areas	Populations centres or settlements with a population of 1,000 to 9,999
Rural centres	Settlements with 300 to 999 people
Rural districts	Statistics NZ defined areas units outside population centres of 300 or more people.

It should be noted that because minor urban areas and rural centres are based on statistically derived area units, it is sometimes a matter of interpretation as to how settlements are labelled. For example, the area unit for South Taranaki's Waitotara has only 66 people, and that for Southland's Balfour Community has 120 people, yet both are counted in the BAF reports as rural centres since their area units are small and compact. On the other hand, Taranaki's Egmont Village with just under 600 people is counted as a rural district in the BAF report, as is Cust (North Canterbury) with 450 or so people, since those settlements are located inside relatively large area units which include scattered populations across open countryside.

This issue is addressed by Statistics NZ's revision of its statistical standards for geographic areas. In December 2017, Stats NZ released the Statistical Standard for Geographic Areas 2018 (SSGA18). This sets the official standard for statistical geographic areas in New Zealand, and allows statistical units, such as households, people, or businesses, to be assigned to the location where they live, work, and

operate. SSGA18 replaces the 1992 New Zealand Standard Areas Classification. The main changes from the 1992 classification are the creation of three new geographies:

- statistical area 1 (SA1) – a new output geography
 - designed to minimise suppression of population data in multivariate statistics tables
 - has a target population size of 100-200 residents
- statistical area 2 (SA2) – replaces the area unit geography
 - provides an output geography for higher aggregations of population data than can be provided at the SA1 level
 - SA2s were drawn to incorporate new urban/rural boundaries, business-commercial areas, and to improve delineation of communities of interest, eg suburbs
- urban rural – replaces the urban area geography
 - Urban areas have been redesigned to represent the urban 'footprint', ie areas of high population density. Previously, urban areas represented the urban footprint plus the surrounding commuting zone. As a result, populations for the new urban areas are generally lower than the populations based on the old urban areas.
 - Rural centres are now known as rural settlements and are identifiable in the urban rural geography.

SECTION 2: REPORT FROM A SEMINAR ON NEW ZEALAND'S CURRENT RURAL SOCIAL RESEARCH

This section reflects material presented by seminar attendees or which was forwarded by those unable to attend. It also includes information submitted both before and after the seminar.

Rural communities

An emerging strand of rural community research comes from one of six research programmes which make up the *Building better homes, towns and cities: Ko ngā wā kāinga hei papakainga*, a **National Science Challenge Research Strategy**, managed by the Building Research Association of New Zealand (BRANZ). The vision for this strategy is that the built environment shapes communities. BRANZ and its partners expect to achieve this through “co-created innovative research that helps transform people’s dwellings into homes and communities that are hospitable, productive and protective”. Some regional (and rural) settlements are likely to be more successful in achieving this goal than others. The programme “Supporting success in regional settlements” aims to improve understanding of the experiences of people living in regional and small towns and support local efforts to make these places more attractive for living, visiting, working and doing business. The programme aims to develop a model of the system of regional settlements and their links to rural activity as well as cities.

As part of the programme “Supporting success in regional settlements”, Mike Mackay, Harvey Perkins, Deborah Levy, Malcolm Campbell, Sarah Edwards and Raewyn Hills are working in three secondary urban centres – Ashburton, Timaru and Oamaru – to examine which initiatives offer the best tools for regeneration and how they work to improve the economic, social, cultural and environmental situation found in these centres. The methodology involves creating a community of practice – sharing approaches to settlement development – incorporating private, public and third-sector practitioners (Mackay and Perkins, 2017:66).

In a further iteration of this theme Etienne Nel, Sean Connolly, Michelle Thompson-Fawcett and Ann Pomeroy are beginning work on the socio-economic dynamics, challenges and opportunities in rural areas through a study of three rural districts and the minor urban areas (Hawera, Greymouth, Mātaura) located within them. The project starts by investigating the localities from the perspective of residents, identifying boundaries and exploring the meaning of place for mana whenua (particularly ahi kā), and newcomers. The aim is to build understanding of the similarities and differences between these places and other places; their socio-economic structures and dynamics; how they link with other places; and the barriers and challenges impacting on, and opportunities enabling, their sustainability and growth.

Mike Mackay, a sociologist at Lincoln University (and see below his work with AgResearch), has a primary interest in the processes and outcomes of rural and urban change, most notably the emergence of new landscapes of production and consumption and accompanying novel “place-based” identities. Current work focuses on interpreting the economic, socio-cultural and landscape changes occurring in rural localities and small towns, particularly areas of high amenity. The research contributes to scholarly debates on rural commodification, landscapes of consumption, rural land use conflict, governance, rural tourism, amenity migration, rural residential development, multifunctional rural space and the global countryside. A secondary research interest is in everyday practices associated with the making and maintenance of house and home, particularly do-it-yourself (DIY) home improvement activities.

Mike has worked on several useful biographic reviews of different aspects of rural research:

- With Harvey Perkins and Stephen Espiner (Mackay, Perkins and Espiner 2009) *The study of rural change from a social scientific perspective: a literature review and annotated bibliography* a review of two decades of literature (1989-2009) on the social science of rural change. It was constructed as an aid to research on the changing nature of Central Otago, with particular emphasis on Cromwell and Makarora.
- With Kay Booth (Booth and Mackay 2007) *Tourism and Recreation in New Zealand's Natural Environment: A bibliography and Research Synthesis*.

Mike's other work includes researching community festivals/events in Akaroa and Geraldine, a community survey in Cromwell, the repurposing of agricultural buildings for tourism, rural entrepreneurship and community innovation and resilience (responses to land use changes, impacts of a venison plant closure in Mossburn, etc).

Sean Connelly, Geography, Otago University is extending his Canadian research to illuminate work in New Zealand where he's mapping the futures of small South Island towns. His West Coast and Southland research focuses on sustainable communities, particularly the conjunction of their social economy with sustainable development. Many rural communities' future viability rests on their ability to manage the challenge of rural restructuring in the context of resource-dependent boom-bust cycles. For some communities privileged with recreational and tourism amenities, the shift from resource extraction to servicing recreation has been a source of growth. Other communities have had to rely on internal capacity and social capital as a means of coping with the loss of major industries. Few have attempted to use sustainability as an amenity and focus for community development alternatives. Sean's research examines rural communities that have adopted sustainability initiatives to cope with the loss of resource-based jobs to increase understanding of the relationship between community capacity, social capital, "can-do" attitude and sustainability, as strategies for community resilience. His work covers issues around changes in the labour market, unionism, and the tensions between living somewhere because you like being there and the functional aspects of living in a particular place. The latter aspect draws attention to how the social infrastructure of a place can be used to attract people to live there.

Also at the University of Otago, Geography Professor Etienne Nel is studying rural and small town development in New Zealand, Australia and Southern Africa. His research has two primary foci:

- 1) Demographic and economic change, including statistical and GIS evidence of population and economic growth/decline and their implications for key issues such as: shrinking towns, resource use and availability, aging, youth and services, employment, local governance and resilience.
- 2) Responses to demographic and economic change, with a focus on local resilience, capacity, social capital, leadership and entrepreneurial opportunities. Related to this the role played by the state - local and national in developing / supporting locally and regionally driven development is of particular interest.

His previous work includes studies of small town responses to change, local economic development, and regional development policy.

At Massey University, Caroline Miller is interested in how rural research can be applied to district plans. As a planner she has a strong interest in the operation and performance of the Resource Management Act 1991 and has worked on the history of planning and environmental management in

New Zealand, including the involvement of Māori in planning processes. Her other area of interest is issues associated with health and aging. She asks “how realistic is it to think that people will age ‘in place’?” and raises questions around service and infrastructure access. Her work has led her to investigations of how amenities can be remodelled rather than replaced, innovative ways for people to get around rural areas lacking in public transport and, following on from Natalie Jackson’s work in the Bay of Plenty, given predicted future declining populations, what jobs can be created to satisfy the needs of older people which will keep them in the area (‘in place’), and which will attract newcomers. Caroline notes that her own Council is reluctant to accept that decline is inevitable. It thinks that because people are needed to run farms and provide services to agricultural and other businesses, a point will be reached when decline stops (and in fact many rural districts are stable or growing, as are many minor urban areas).

At Auckland University of Technology, Charles Crothers (whose interest in rural communities dates back to practical work on rural development and revitalisation with the former Ministry of Works) is undertaking a statistical exploration of a range of rural issues including:

- Perceptions of the urban/rural divide
- Social indicator differences between urban and rural areas
- Differences in attitudes between urban and rural dwellers
- Social characteristics of rural area units and the impacts of agricultural change on these
- Settlement size hierarchies and changes.

Rural demography

Waikato University’s **National Institute of Demographic and Economic Analysis** (NIDEA) is the only national institute of demographic and population-focused research in Aotearoa/New Zealand. It undertakes research designed to inform choices and responses to the demographic, social and economic interactions that are shaping Aotearoa/New Zealand's future.

Jane Richardson attended the seminar on behalf of Professor Natalie Jackson to report on the NIDEA Marsden project on subnational depopulation in New Zealand, and where and why it is occurring. The work is driven from a global perspective: population growth is theorised to cease about 2100, resulting in irreversible population shrinkage in most countries. Natalie and her colleagues’ work on regions and communities focuses on the demographic, social and economic transformation of New Zealand’s urban, and (more recently) its rural centres. The changes taking place, whether at centre or territorial authority level, are not uniform and nor are their effects.

One strand of the project examines the mechanisms of population change in 143 towns, 132 rural centres and 66 territorial authorities. Due to the large number of small units that would need to be analysed rural districts are excluded from the analysis but where possible trends for the aggregate rural district population are noted (Jackson and Brabyn 2017). Defining rural centres as having between 300 and 1, 000 people, and towns and cities as settlements over 1,000 people, their key findings are:

- Forty-one per cent of NZ’s 276 towns and rural centres were smaller in 2013 than in 1976 (59 per cent grew). Rural centres were more likely to have declined than towns.
- Most declining towns/rural centres had natural increase (births exceeded deaths) but declined in size because this was insufficient to offset net migration loss.

- Many growing towns/rural centres also had net migration loss but this was offset by natural increase.
- The level of natural increase determines whether towns/rural centres experiencing net migration loss grow or decline.
- Net migration loss is causing rural centres to have older populations than towns, but towns are gaining older retirees and are more likely to have in excess of 20% aged 65+ years. At the 2013 census, 41% of towns compared with 30% of rural centres had over one-fifth of their populations aged 65+ years).
- Population ageing is resulting in the emergence of a trend towards natural decrease. From 2038 this trend will dramatically slow growth in over half of Territorial Authority areas.
- Natural decrease is currently primarily due to age-selective migration (out migration of young adults, in-migration of retirees) rather than low fertility per se.

The **Bishop's Action Foundation** (BAF)

BAF (see Introduction and below) has sponsored a socio-economic profile of rural districts, rural centres and minor urban centres in Taranaki's three Territorial Authorities (TAs), and a comparison of these with the rural components of seven other Territorial Authorities (ten in all, six North Island and four South Island). The work was carried out by Ann Pomeroy (CSAFE) and part-funded by the TSB Community Trust, and shows considerable variation in the pattern of growth and/or decline between the area units in each settlement type. As identified in the NIDEA research (above), rural centres are mostly in decline. However, over half of the rural districts and minor urban centres in the ten TAs either grew or held steady between 1996 and 2013 (using Statistics NZ census data with consistent boundaries).

The median age in the ten study areas' rural locations was older than the New Zealand median of 38 years. People living in minor urban areas were considerably older (median 43 years), in rural centres the median was 41 years and in rural districts it was 40 years. This means there were fewer people in the 65+ years age group in rural districts than in the centres. Age medians in minor urban areas and rural centres are raised by the move to these centres of older people, in retirement, from rural districts.

Rural districts have experienced a 'hollowing out' of their age pyramids, particularly losing people over 15 years who leave for high school/tertiary education, and people between 20-40 years who leave for work opportunities in urban centres. In contrast minor urban and rural centres of the ten TAs exhibit fairly even age profiles. Over time there is in-migration to rural districts of older workers (40+ years) and their families, and out-migration of the 70+ years age group retiring to urban centres.

Other data displays a considerable daily commute for work both to and from rural and urban places, so there is considerable variation between the numbers of people usually resident in a place and those who commute to work there. The dominant occupation of people living in minor urban and rural centres is elementary work (which includes freight handling and goods delivery, cleaning, packing, construction, manufacturing and food preparation) due to the dominance of manufacturing industry in those locations. Managers (a group which includes farmers and farm managers) dominate in rural districts. In rural districts there are fewer paid employees and more employers/self-employed than in the minor urban areas and rural centres. Unsurprisingly, given their higher proportion of retired

people, minor urban areas and rural centres have more people not in the labour force, compared to rural districts.

For those living in rural districts proximity to an urban location/population centre has a significant impact on the range of industries in which people engage. In all the TAs except Southland, fewer than half of the usually resident rural district populations over 15 years engage in a primary industry. Unsurprisingly, however, the more remote a rural district, the greater the importance of primary sector employment. The primary industry workforces of districts closer to urban or rural centres are augmented by people from those centres. People commute from minor urban areas to work in construction, retail and health care (in both other urban centres and rural districts and centres). People commuted to rural centres to teach, for construction work and into specific centres to provide transportation, accommodation and food services.

Environment Canterbury

Research undertaken by Mary Sparrow, an independent consultant to a project to assist landowners in Ashburton District comply with the consent requirements of the Canterbury Land and Water Regional Plan, focuses on the demographics of Ashburton District. Whereas projections by Statistic New Zealand undertaken in 1996 suggest population growth in the district is unlikely, the area's population grew by 13% between 2006 and 2013, the fourth highest growth rate of any local authority area in the country. A significant change in the age structure of the District's population also occurred. The number of young adults has increased, and the trend towards a lower percentage of younger children in the District has been reversed. The increase in the area's population parallels an increase in business activity (and employment) across the District. Interestingly, growth was greater in the rural areas than in the urban areas, with the highest growth recorded for Hinds area unit. Business data for recent years shows substantial growth in the number of businesses in Ashburton's rural areas, mostly in non-agricultural industrial classifications. Overall, there has been no significant increase in the number of farming businesses, but between 2002 and 2007 the number of smaller farms decreased and the number of larger farms increased; there was an increase in average herd size; and a substantial increase in employee numbers in agriculture, attributable to the growth of the dairy industry in the District. At the same time cropping expanded, with the greatest increase being in the area planted in wheat. There was also an increase in the area planted in herbage and vegetable seeds. Business growth in Ashburton's rural areas was predominantly in manufacturing and construction, followed by sole traders providing professional advice and business support, particularly related to finance and insurance.

Rural community resilience, preparation and response to natural hazards

Willie Smith (now retired from the School of Environment, Auckland University) researched the social impacts of the 2004 floods and the subsequent 2006 drought in the Manawatu. His research was designed, in some part, to explore the drivers of the 'hollowing out' of rural New Zealand. The published papers draw on findings from a series of detailed surveys of 39 farm households directly affected by the floods and a sub-set of drought impacted farmers, as well as 17 individuals and officials directly involved in implementing and managing the flood recovery programme. The nature of the impact on rural families highlights how the 'hollowing out' of rural New Zealand has changed the capacity of rural communities to respond to natural hazards and increased their sense of isolation. The floods exposed the vulnerability of rural communities. This is shown to have implications for policies designed to build resilience and improve responses to adverse events, including the need to

support local, community initiatives for self-reliance and mutual support. Findings include that approaches to manage better long-term flood risks should be designed within a context of a declining population and reduced social and local infrastructure.

A related piece of work addresses the snow-fall disaster that hit Timaru and much of south Canterbury in 2006. This work attempts to place the event in some historical context, comparing the physical dimensions of the event and the associated media coverage against that generated in previous 20th century snow storms. It highlights the social and economic repercussions of a shift in household vulnerability tied to an increased dependency on communications and transport links.

While the fact of natural hazards/disasters has received much attention, Willie argues that resilience/recovery to disasters has drawn less attention. Equally the serious impact of disasters or hazards still commonly described as “natural” but involving technological change, policy shifts and the like, have commonly been down-played as a necessary cost of ‘progress’ and ‘change’.

In 2015, Willie joined the AgResearch project on Resilient Rural Communities (see below). His work within this programme has focused on Wairoa in northern Hawkes Bay and on Whole Farm Plans in the Horizons Region. The latter work includes extensive, detailed farm interviews (completed in 2016) touching both on those factors that explain plan adoption and plan rejection, and the implications of such plans (and other factors) on increasing farm and community resilience and recovery, specifically in response to the 2004 floods. This work has been released as a report to Horizons/MfE (*It’s Everyone’s Business: Whole Farm Plans – a vehicle for implementing policy*) and is being written-up for submission to appropriate journals.

Wairoa exemplifies a range of issues. The township of Wairoa and its surrounding district (population 7,890) is in long-term decline in terms of employment, population structure, health, and general wellbeing. Over 60 percent of the population is Māori. From a workshop held in the district in 2016 it emerged that despite the facts associated with a declining population, shrinking job opportunities, and other indicators of low levels of social well-being, the community is coherent, proud, supportive of their District Council, and people are reluctant to move out of the area, even when the opportunity exists. Wairoa also has a larger proportion of its population involved in voluntary work than anywhere else in the country. On many counts the Wairoa community *is* resilient, a finding almost counter intuitive in the face of hard facts – the ‘hollowing out’ of the community, population loss, low incomes and other indicators of low levels of social well-being. It throws into doubt attempts to measure resilience with a sole reliance on conventional ‘top-down’ indicators which ignore social coherence and community views. There is a complementarity and some overlap between conventional indicators and community perspectives – the need for jobs is a case in point – but efforts to promote resilience require greater insight on what resilience means from different perspectives and how commonalities and differences can be reconciled.

The work on Wairoa identified some key themes including the potential impact of forestry on community resilience, the changing nature of community-farm linkages, and the role of the informal economy in community resilience. This latter theme is the focus of Willie’s current work. It includes an examination or “unpackaging” of the Wairoa A & P Show as a major social event that brings town and country together. Work on the informal economy continues.

Resilience to Nature's Challenges (National Science Challenge Series) funded through the Ministry for Business Innovation and Employment

The Resilience Challenge is one of New Zealand's most ambitious initiatives to develop and apply new scientific solutions to transform our response, recovery and "bounce-back" from the country's wide diversity of natural hazards. The Resilience Challenge aims to build new knowledge and tools to underpin a broad-spectrum resilience to natural hazards in New Zealand's unique rural, urban, coastal and Māori communities. Hazards addressed include earthquakes, volcanoes, landslides, tsunamis, weather, coastal and rural fires. There is also special emphasis on extreme-risk sites – where multiple hazards combine to threaten community sustainability.

This multi-dimensional project has three priority research areas focused on understanding, harnessing and building social norms that underpin a resilient culture in New Zealand. These include finding tools and strategies to facilitate resilience becoming an integral "part of what we do and who we are".

Caroline Orchiston's (Centre for Sustainability) research focuses on building a more resilient New Zealand by transforming how we prepare for and mitigate against rapid (earthquakes, floods) and slow onset (climate change-related) disasters. Caroline's background in both earth and social sciences involves research on disaster resilience and recovery in the tourism sector, community and business resilience, and scenario planning for impacts on critical infrastructure and emergency management during earthquake disasters.

Kaikoura quake social science response

Nick Craddock-Henry (Landcare Research) is part of the Rural Program, Resilience to Nature's Challenges and leads the Kaikoura Case Study, 'Resilience Solutions for Rural New Zealand', which focuses on knowledge brokering, and social learning for rural resilience.

The project includes a workshop to make connections between existing research programmes, individual researchers, iwi representatives, and research end-users. A key theme is the need to work in a "joined up way" by engaging with each other, with individuals, government, and communities. In particular, for disasters that impact mainly on small rural communities, it was felt that the top-down focus often favoured by government, and even researchers, continues to prevail in crisis and recovery. This has meant a program approach involving not only engagement with those in disaster areas but within the research community and efforts to help reduce the risk of saturating the research field by collaborating and sharing data where appropriate.

AgResearch: Resilient Rural Communities Programme

Margaret Brown is in the People and Agriculture team. This group aims to provide an understanding of the context in which we live, learn, make decisions and act. The group attempts to explore the drivers of human actions and develop alternative strategies and practices to improve outcomes for pastoral agriculture.

Resilient Rural Communities (RRC) is a five-year, core-funded research programme which sits under AgResearch's Statement of Core Purpose - Outcome D (Increase the capacity of rural communities and enterprises to adapt to changing farming conditions in ways that balance economic, environment, social and cultural imperatives). RRC is aligned to the 'Our Land and Water National Science Challenge' hosted by AgResearch (see below).

The overall aim of the RRC research programme is to build and extend the capacity of rural communities to change and adapt in response to changing farming conditions, through *co-designing, constructing and evaluating pathways that will build resilient land based enterprises and rural economy sufficiently to support the growth of strong, resilient rural communities*. The programme aims to deliver information about the characteristics, drivers and thresholds of social, cultural, economic, institutional and environmental resilience, which can support rural communities improve their resilience when faced with multiple pressures, including land-use change and other external factors that cannot be controlled and/or are difficult to mitigate. This programme comprises a portfolio of research that includes transdisciplinary case studies, analysis and modelling that will co-design, construct and evaluate pathways to build capacity for rural community resilience at a farm and community scale.

To fill the gap in the body of New Zealand knowledge on how to build resilient rural communities in response to land-use change, the programme is focusing on resilience definitions, pathway dimensions, drivers, indicators and thresholds to produce if possible, resilience metrics that are New Zealand-centric, Māori-centric and issue specific. The methodology used includes case studies to facilitate the study and integration of multiple, trans-disciplinary facets of resilience in a local context. The combining of multiple facets of resilience enables the research to explore the combined impacts, consequences and unintended consequences of new pathways to resilience on rural communities. Three cases chosen were for study in 2016-2017: Wairoa, Waikato and Southland.

Wairoa Lead Researchers: John Rendel (AgResearch) and Willie Smith (consultant, see above). John's work aims to study Māori land use options with Ngāti Pāhauwera, youth employment in agriculture and agriculture related industries in the Wairoa area, and place-based value-added options for the Wairoa community. Willie's work explores resilience across the wider Wairoa community. It includes the role of the informal economy and shows – explicitly the local A & P Show – play in building and sustaining rural community resilience.

Waikato Kaitiaki Framework for Māori land-use decision making Lead Researcher: Estelle Dominati (AgResearch). This case brings together previous research on eco-systems services and land use decision-making in the Waihou (Waikato) region and co-constructs these learnings into a Kaitiaki framework for use in Māori land use decision-making. The framework will be co-constructed, trialled and evaluated in the Waikato region.

Southland - small town renewal (towns under 10,000 people) Lead Researchers: Simon Fielke, Tracy Nelson, and Neels Botha (all AgResearch). This study comprises two main sections, a literature review and a pilot case study. The literature review and the findings of the case study will be used to develop a larger programme of work on small town renewal. The literature review uses the following questions to guide the review.

1. What is resilience?
2. What does resilience look like in small towns?
3. What are the tipping points/thresholds (economic, social, cultural and environmental) for enabling community resilience?
4. What is the relationship between individual resilience and community resilience?

Small town renewal pilot case study: Mossburn, Southland

Project context and aim: The 'Southland case study' addresses growing concern about the resilience of small rural settlements in New Zealand. Questions have been raised at all levels about the ability of

rural communities to adapt to changes in: land uses, farm ownership structures, consumer demands and expectations, demographics, and economic and environmental policies. While some rural towns have managed to thrive in this context of change (ostensibly demonstrating their resilience), many have been characterised as ‘zombie towns’ owing to their underperformance, setting in train a series of national and local government programmes to ‘reboot’ and revitalise these places. (This is illustrated particularly by MBIE’s commitment to the development and implementation of regional economic action plans as part of the *Regional Growth Programme* and *National Science Challenge 11: Building Better Homes, Towns and Cities*). The international research literature on rural resilience, as summarised by Mackay and Petersen (2015) in the first year of this research programme, points to a set of resilience ‘attributes’ – yet to be ground-tested in New Zealand – but which have the potential to inform local analysis, and the abovementioned research programmes and design pathways for improved outcomes for small rural towns. The immediate aim of this pilot study (in Mossburn, Southland) is to ground-test key aspects of resilience (frameworks) in a rural/farming community where there is evidence of land use change and associated community transformation.

Also see below under Production Sector research for an outline of how the Resilient Rural Communities Programme aligns with the **Our Land and Water National Science Challenge**).

Student perspectives on resilience

Peter Holland and Ann Pomeroy’s (2016) article on community resilience in Greymouth and Grey District is based on research essays compiled by two classes of geography students from Greymouth High School, submitted for a competition hosted by the New Zealand Board of Geography Teachers and the New Zealand Geographic Society in 2013 and 2014. Students from years 10-13 were asked to identify and investigate factors that are building community resilience in their home areas, and the entries provide young people’s perspectives on how well individuals, families and communities ‘bounce back’, adapt, change and become stronger following an adverse event. The students’ entries catalogued a series of natural disasters, including catastrophic earthquakes, floods, tornados, fires and fatal mining-related accidents, as well as other issues which undermine individual and community resilience. The latter include mental health issues, anti-social behaviour such as bullying, and the impact of business closures by key employers in the district. The students’ essays show that community resilience in Grey District depends on individual and collective capacity for action. The greater their involvement in community affairs and projects, the more likely individuals and families are to form networks and participate in communal activities. In the isolated minor urban area of Greymouth, as elsewhere in New Zealand, membership of voluntary organisations and participation in planning for, and responding to, catastrophic events helps citizens respond effectively in times of adversity. Through improving their understanding of the factors that enhance resilience, the students also became ‘active makers of knowledge’ (rather than just receivers of knowledge).

The place of intangible cultural heritage in building enduring community resilience

Oral histories and interviews with Ngāti Manawa, Ngāti Whare, other residents, and service providers working in the rural community of Murupara are the basis of a study into the enduring resilience of two iwi in the face of colonial invasion, land alienation, exploitation, racism, economic shock and social stresses (Pomeroy and Tapuke 2016). Attachment of these iwi to their intangible cultural heritage has enabled them to be resistant to assimilation pressures until finally getting a fair hearing and an official apology for the adverse treatment dealt them by the Crown. Integrating culture, and in particular the concept of intangible cultural heritage (tikanga, including inclusive decision-making, communal

ownership and distribution of benefits, a focus on spiritual and community as well as individual well-being – caring, planning, guardianship, empowerment, cultural endorsement and consensus), into social theory perspectives enables a deeper understanding of the drivers of community resilience.

Rural histories

Robert Peden is writing a book about the lives of women on the rural frontier in the South Island of NZ in the 19th century.

Emeritus Professors Peter Holland (Geography, Otago University) and Sherry Olson (Geography, McGill University, Montreal) are investigating place-making and landscape change in rural southern New Zealand between about 1860 and 1914. The area extends from Foveaux Strait to the Hurunui River and from the Pacific coast to the Southern Alps. They are making particular use of farm and station diaries, individuals and company letter books, articles in regional and provincial newspapers, and ledgers kept by station holders and stock and station agents. Sherry is leading the research into place making, especially work done by women and children on small rural properties; Peter is attempting to calculate the monetary value in pounds of landholders' investments in such capital items as fencing materials, timber for construction and corrugated iron for roofing, windmills and water tanks, drains, trees and shrubs for shelter and decoration, orchard plants, and equipment for cultivation, harvesting and dairying, all of which affect the physical appearance of a rural landscape. They have been able to estimate the value of capital items needed to keep ploughs, harvesters and the like in operation, and are using this information to identify years when the value of investments in capital equipment either exceeded or was less than that of items needed to maintain it. They have begun to publish their findings (see for example Holland *et al* 2017).

Jane McCabe (History, Otago) is working on a Marsden funded project: Splitting up the farm? A cross-cultural history of land and inheritance in Aotearoa. Her study follows early European settlement on the Taieri Plains and a north Hokianga settlement.

Community development through rural education (REAPs)

The Rural Education Activity Programme (REAP) consists of thirteen REAPs delivering education opportunities to thirteen rural communities in New Zealand (Buller, Central King Country, Central Otago, Central Plateau, Eastbay, Far North, Marlborough, Ruapehu, Southern, Tairāwhiti, Tararua, Wairarapa, and West). For the last 35 years, its aim has been to make a difference to the lives and long-term plans of rural people by working collaboratively with local partners including Iwi and Hapū.

Ryan Morrison (who works for Eastbay REAP Aotearoa) completed a PhD in Education from Massey University in 2016 entitled *Exploring New Zealand's Rural Education Activities Programmes (REAPs): Social capital in a lifelong learning and community development context*. His study explored how REAPs work with their communities – in academic-speak - the extent to which REAPs use a social capital approach to contribute to rural education. Social capital is defined as the resource residing in networks of individuals, based on mutual trust and shared social norms, which can be brokered and mobilised to achieve social benefits, particularly in the application of knowledge and skills. A conceptual framework uses four key elements to investigate: networks, trust, social norms, and brokerage. Given the lack of published material on REAPs and their work to provide responsive lifelong learning in rural communities, Ryan used a primarily qualitative design. Data was collected through in-depth interviews with REAP managers and questionnaires for REAP learners. The aim was to

explore the lived experiences of these two REAP groups to identify their views on how REAPs operate so that those views could be considered within the social capital framework of the study.

Findings support the strong presence of the four social capital elements in REAP activity. Both strong (social) and weak (institutional) forms of trust are described as influencing learner participation in networks, where REAP plays a role in brokering that participation within similar (bonded) and differing (bridged) networks. REAP staff build strong supportive relationships with their communities and make use of the trust gained from these relationships, plus a values-based decision-making approach to gain local community and cultural knowledge. This is then applied to their planning and work programmes to ensure they run relevant and responsive learning activities. The result is that learners' confidence is enhanced and learners build their identity (understanding of themselves and where and how they fit into their communities) enabling them to take part in other social activities, including further learning and collective action.

Lived examples of these elements support a social capital approach that fits well with the lifelong learning and community development processes outlined by the REAP mandate. These processes are defined holistically to consider the integration of individuals' beliefs, viewpoints, and behaviours as much as skills and knowledge. The social capital approach used yields clear recommendations for Government, REAPs, and partner organisations. Flexibility, values/identity-based education, and closing network gaps to facilitate innovation came through as REAP social capital practices that could inform policy and partnerships across the whole of the education sector. Ryan suggests further research is needed to more closely consider the complex relationships of the identified social capital themes. In terms of emergent themes, a deeper exploration of innovation produced through brokerage within REAP activity is highlighted as a key area of future research.

Critical messages for government (whether local or central) is that when you engage with people by getting to know them, and listening to them, they will participate and engage. If this process is done effectively (i.e. trust is built) it is possible to influence (change) behaviour. The REAPs are paid to broker and build community relationships – and this builds innovation in rural areas. Rural people mostly just want to get on with doing things. REAP workers know who's in the community, who will engage, and what their skills are, so can assist things to happen expediently. Ryan notes that many newcomers don't feel part of a community or at least of the 'in crowd' of a community – even if they've been living there for 50 years. This negative side effect of social norms and shared values persists in small communities where place-based identity is central to daily life. He links this to the need for schools to emphasise identity and confidence building skills as core self-knowledge for wellbeing – something not yet measured or assessed.

Production sector research

Massey University – Institute of Agriculture and Environment

Janet Reid is a senior lecturer in agricultural systems in Massey's Agriculture and Environment Institute. Her research has been on the forces impacting on farmers and on their resilience.

Janet's PhD research (completed in 2013) explores governance issues and sustainability in highly erodible hill country (HEHC) in the Manawatu-Whanganui region. The sustainability of current farming practices has been criticised and demands made for fundamental changes in farming. This research adds to the debate by providing insights into how an aspect of farming that has environmental implications is governed. The research provides examples of the difficulties farmers face in balancing

the diverse and conflicting demands placed on them to farm sustainably. Farmers are encouraged to be, competitively-productive, financially profitable, and socially responsible in managing the impact of farming on the environment. Accepted farming practices maintain and enhance, as well as constrain and compromise, the environmental sustainability of natural resources. The farming of HEHC in the Manawatu-Whanganui region is governed by central government, the regional council and farming exigencies. While there is no coherent or deliberate governing of the farming of HEHC or sustainable agriculture, aspects of sustainable agriculture are governed across central government programmes. However, sustainability outcomes are incidental to the broader economic and trade outcomes sought by central government. The main agenda for agriculture advanced by central government is one of competitive productivism through the facilitation of market-led governing. The significant role that regional level government in New Zealand can, and does have in governing farmers use and impact on natural resources is revealed in this research. The regional council is advancing competitive productivism in farming moderated by sustainability objectives.

Other work includes farmers' financial management and the relationship farmers have with the banking sector. The nature of interactions between farmers and advisors is the focus of a growing body of research. While many studies explore the potential role of advisors in facilitating farmers' practice change concerning land use, studies that specifically investigate how advisors support farmers with financial management (FM) are limited. Janet's work analyses who farmers' FM advisors are, and explores how farmer-advisor interactions about FM are shaped. This work involved semi-structured interviews with both farmers and advisors (bankers, accountants, farm advisors, independent financial advisors and industry funded advisors). The data suggest that farm financial information and FM can be sensitive issues. Being good at FM is not seen as central to a farmer's identity and this can translate into a low level of interest in FM and a passive attitude towards acquiring financial advice. Farmers most openly discuss FM with their banker and accountant and some seek advice from farm advisors. Janet found a selection effect. Big borrowers (farmers with high debt and a high likelihood that they will borrow in future) received more FM advice from banks and accountants, due to their risk profile and accountability to the bank for their financial performance, compared to those borrowing only small amounts. The study highlights that the topic 'financial management' as it links to indebtedness levels and accountability introduces a new dimension to the relationship between farmer and advisor not previously publicly reported.

Reframing complex challenges

Janet also spoke of the work of colleagues who have been engaged in reviewing the potential impacts of implementing the national freshwater reforms. Nathan Heath (Hawkes Bay Regional Council) and others have summarized the themes from an East Coast Hill Country Conference held in October 2015 which focused on the relationship between land owners, the communities in which they live and the future sustainability of the East Coast. The conference recognized that a different approach to resource management is required. Points raised (Heath *et al*, 2016) include:

- Adversarial processes don't enable changes in environmental practice
- Need to recognize changing community expectations as to the level of stewardship farmers should provide for natural resources
- Quality rural infrastructure is necessary to attract and keep good people on farms and in rural areas and to healthy communities that are critical to the stewardship of regional infrastructure and natural resources
- By understanding what influences the adoption of good practice, and having a culture of good practice, progress will be made in managing resources more effectively and sustainably

- Systems driven by farm returns rather than capital gains, which take a holistic approach (considering cultural, environmental, social and economic matters), and where people take collective action and work to common goals, focusing on values and identities, and understanding the places and situations where people live, are most likely to be successful.
- Critical to implementing effective change is recognition of the importance of 'a way of life' to farming and how farm family values and farm succession challenges underpin farm decision-making.
- While forestry may have a role in controlling accelerated soil erosion, forestry can't be considered on its own as it is also seen as impacting on the human, social and built capital of rural towns and small communities in places like Wairoa.
- New technologies such as use of drones, remote sensing, accurate fertilizer/pesticide placement and farm metrics make the business of farming more technical than previously.

Janet's colleague David Gray (Farm Management) is looking at farmer learning through communities of practice and using an innovation systems framework to consider innovation in the farming sector.

Waikato University – Geography programme

As part of her work on mobilities, social, cultural and gender geography, Gail Adams-Hutcheson, a teaching-fellow at Waikato University is exploring the experiences of 50/50 sharemilkers whose contracts effectively force them to move on an annual basis. In these contracts the costs and benefits of operating a dairy farm are shared. The system provides a stepping stone into landownership, and a means for enabling would-be dairy farmers to learn skills and build equity. Sharemilkers on a 50/50 contract manage the farm on behalf of the land owner, own the livestock, and pay costs associated with labour and machinery. The land owner pays the costs associated with the land and fixed capital. Income from the milk produced is split 50/50. Some 34 percent of dairy farms operate sharemilking contracts in New Zealand producing 42% of New Zealand's milk (worth around NZD\$13.6 billion), from herds of typically 372 cows. On May 31st and 1st June each year cows are packed into stock trucks and they, along with equipment and families, move to a new farm (often but not always in the same district). The shift creates major disruption for up to 10,000 families, chaos for small rural communities and schools (not to mention being problematic for children's education), and is unsettling for the stock. The system is highly competitive with up to 100 people competing for a single contract. The landowner holds controlling power in this situation. While women sharemilkers are rare, there is a (chauvinistic) expectation that the wives of sharemilkers will be available to assist by rearing calves, managing finances, cooking for workers, and being around to run errands and sort logistics. Sharemilkers can miss out on contracts if it's known their partners will not be part of the package.

Together with researchers from the Department of Labour, Richard Bedford (Waikato, Emeritus Professor) and Charlotte Bedford (Adelaide University) have been working on aspects of seasonal agricultural, horticultural and viticultural work undertaken by short-term migrant labour from Pacific nations, including how this impacts on rural districts and rural centres.

Lincoln University

While at Otago University (CSAFE), Chris Rosin was part of a transdisciplinary research group (ARGOS) investigating the role of best practice audits for environmental governance in the New Zealand kiwifruit and sheep/beef sectors. His research background is in political ecology and geography and he has worked internationally on the linkages between production and regionalism. More specifically, Chris investigated the impact of changing (political) economic situations on the capacity for farmers

to approach the environment in a manner that facilitated sustainable practice. This research expanded to include the justifications used by diverse actors in commodity value chains to underpin practices that involved interaction with environment and society. The focus moved to best management, organic and other audit practices and the implications of these for sustainability under these forms of governance. A similar approach was used to analyse farmers' responses to demands for greenhouse gas mitigation and the broader context of global food security.

Chris's current research continues in the area of agri-environmental governance, including its social context and moral underpinnings. It involves the development of 'food utopias' (and utopian theory) as a mechanism for envisioning and enacting more positive and collaborative food futures, and for investigating farmers'/producers' response to specific environmental and economic conditions, including climate change, land and water degradation, and shifting trade relations.

Otago University

From Sociology at Otago University, Professor Hugh Campbell has been engaged since 2010 on research into the political economy of agriculture and food. This clusters around some key themes:

- The commercialisation of sustainable agriculture systems like organic and environmentally-friendly production.
- Farming, climate change and energy shocks.
- The development of private sector governance over agri-food chains under the influence of neoliberalisation.
- The politics of Free Trade Agreements and the changing position of New Zealand's trade and agricultural policy regimes in a global context.
- The 'new politics of food' and the elaboration of new practices around food waste.

Hugh is also working on a book (working title: Three Dimensional Farming: A Political Ontology of Agriculture and Food) about the politics of farming in New Zealand. It examines the way in which farms and farming systems exist in ontologically closed worlds which pacify and de-politicise external political threats and engagements. This has rendered New Zealand particularly vulnerable to challenges from either: 1) wider social and political groups contesting the countryside (what is currently termed 'social licence to farm') and/or 2) external market drivers demanding greater adherence to sustainability or environmental claims.

At Otago University's Centre for Sustainability, Ann Pomeroy returned, nearly thirty years later, to a sample of 119 hill country farmers first interviewed in 1984 just before state subsidies and other assistance was abolished. Some 79 percent of the original sample (and/or their successors) were interviewed again. The focus of the study was on the resilience of family farming in the face of economic shocks, natural disasters (especially drought) and for some, personal tragedies. The original sample was a stratified (by size of holding) 10 percent sample of sheep/beef producers in each of two districts: the 'wet' Waitomo county and 'dry' Central Hawkes Bay county. The follow-up study found that despite removal of subsidies family-owned farms remained the predominant ownership structure. That is, where trusts and companies took ownership of the land and/or business, these structures were owned by the family. In both the original study and the follow-up, it was clear that farm businesses and farmlands are regularly bought and sold. In 1984, 48 percent of the farmers had bought (and sometimes sold) at least one other fully economic stand-alone farm unit in addition to the one they were then on. After 1984, 51 percent of the farms were sold. We have information on why 61 percent of these farm businesses were sold. Only one was sold because the returns to farming were low. A third of the sellers bought another farm elsewhere, one quarter retired, and a further quarter died or had major accidents ending their farming career but had no successors so the farm

was sold. The new owners of these properties were predominantly farm families who ran the business themselves. Only two farms were purchased by corporate investors (and run by managers and hired staff), while a third (since sold again) was bought by an overseas investor and philanthropist. Thirty years on, farm viability was compromised more by drought (and ineffective debt management) than by removal of subsidies (Pomeroy 2015).

Crown Research Institutes

SCION (Crown Research Institute specialising in research, science and technology development for the forestry, wood product, wood-derived materials, and other biomaterial sectors). Staff interest in attending the seminar was due to their work on community resilience and recovery post-wildfires, preparation for wild-fire, people's (including tourists') understanding of fire risk and management; the role of (rural) volunteers in fire-fighting; bio-waste management; risk and resilience as well as interest in stakeholder engagement (including managing pest incursions/spraying; communication of risk and climate change adaptation).

Lisa Langer has been engaged in the rural resilience case study underway in the Kaikōura district preceding the earthquakes. Her interest is shared community/agency planning across the 4 Rs (reduction, readiness, response, recovery) across all natural hazards, including wildfires. Improving communities' capability to prepare for, and deal with disaster is a key focus. Her work on bio-waste management includes working with communities and experts to collectively identify solutions to waste management issues.

Andrea Grant has been working on community resilience planning in a multi-hazard environment with a focus on the role played by volunteers, and drawing lessons from 'wildfire resilience' (both urban and rural community management of, and response to, wildfire). The focus here is on identifying risk issues and finding better ways of communicating risk to diverse groups of people.

Both Lisa and Andrea are working on bio-security issues including finding ways of dealing with the urban backlash against managing problems (such as spraying to eradicate pests), how to utilise "citizen scientists" in passive surveillance to enable more rapid and timely responses to pest incursions, and how volunteers (casual and spontaneous) assist in disaster response.

Peter Edwards is a political scientist at Scion with a research interest in forest policy and adaptive governance at local, national, and international levels. This includes Treaty issues, East Coast accelerated soil erosion (including using forestry to manage accelerated erosion), and engagement with Ngāti Porou. He is looking at engagement, trust-building, and issues around a 'social licence to operate' in forestry and other primary sectors (dairy, horticulture, sheep/beef production, aquaculture). The latter work has led to collaboration with the Cawthron Institute's marine sector and issues around the social licence to operate in the oil and gas sector, ports, and sustainable seas issues. It's a multi-agency project.

Work underway on migrant dairy workers uses a social capital framework to look at how the integration of migrant workers into community impacts on production. A further project reviews the role of gender in depopulation. Rural communities where there is no work for women have experienced population decline as the women (and their families) leave for work elsewhere.

Landcare Research (manages terrestrial biodiversity, ecosystems and land resources).

Staff have undertaken a series of surveys of rural decision makers to understand what drives decisions at the farm-level.

Nick Cradock-Henry is working on the Kaikoura case study (see rural community resilience to natural hazards above). He has also undertaken work on vulnerability and adaptation to climate change at farm-level (including of kiwifruit growers). At a regional and national level his work includes looking at how rapid on-set hazards and disasters (e.g. floods and earthquakes) can impact on rural business value chains including on tourism, dairying, sheep-beef production and so on. For example, power outages or road closures can halt product movement (such as the movement of milk by train from the West Coast to Christchurch, or movement of stock following the Kaikoura earthquakes), and how this may be managed. Much of Nick's work includes the co-creation of models and working with stakeholders to identify needs and solutions. Landcare has a joint project with Jim Sinner (Cawthro Institute) and others on freshwater management and policy, and on collaborative processes.

AgResearch (Crown Research Institute which partners with the pastoral sector to identify and deliver the innovations needed to create value for New Zealand). In addition to funding the **Resilient Rural Communities Programme** outlined above, AgResearch is the lead agency on the Our Land Our Water (OLW) National Science Challenge.

Research from the Resilient Rural Communities Programme aligned to OLW

OLW NEXUS- Resilience Theory Lead researcher: Simon Fielke (AgResearch)

The Resilient Rural Communities (RRC) research programme aims to frame the RRC programme in the context of existing international work in the rural community resilience space. The potential role of the Resilience Framework that has been developed in the RRC programme is also being explored. This will allow members of the RRC team to benefit from a stronger theoretical programme foundation, with the aim of increasing the value of RRC work in the international community resilience space. The Our Land and Water Challenge (OLW) will also benefit from a broader social science understanding of conceptualisations of community resilience and be able to draw upon contextually relevant examples of high quality work in this research space.

OLW- NEXUS- Use of the RRC Resilience Framework in the NEXUS Lead Researcher: Bill Kaye-Blake (PwC)

The RRC programme developed a Resilience Framework as a tool to bring together their thinking on definitions of resilience, and the dimensions, indicators and thresholds of resilience in the RRC research programme. The framework is currently used to guide strategic thinking and decision making on the research that should be included in the programme. Team members are currently working with the Challenge to identify ways to use the RRC Resilience Framework in the NEXUS in particular, to assist with strategic thinking, decision making and planning.

OLW- Next Generation Solutions- Supporting Successful Rural Entrepreneurship Lead Researchers: Mike Mackay (Lincoln University) and Tracy Nelson (AgResearch)

This research aims to produce practical initiatives that will support entrepreneurial activity on farms and in rural communities in Aotearoa New Zealand. The outcome will be farms and rural settlements that are prosperous, economically diverse, connected, resilient *and* environmentally and socially sustainable. Informed by research on the rural entrepreneurship 'process' and the notion of social 'embeddedness', and to address the main research questions, this two-year study explores the

experiences of a selection of farmers (including newly formed farmer networks) who have successfully established (or otherwise) a new farm venture in New Zealand. For the purposes of this study, a new venture may be defined as:

- a major farm system change – such as from conventional agriculture to organic farming (e.g., Retro Organics) or the adoption of a holistic sustainable approach (e.g., Mangarara Station)
- the introduction of an entirely new farm venture to an existing property as part of an income diversification strategy, or
- the formation of a new network of farms/farmers who together develop a new venture (e.g., the Coastal Spring Lamb farm network)

An initial scan of secondary data sources identified the following farms as possible case studies:

- Farmer collectives: Gizzy Milk, Coastal Spring Lamb, The Farmers Mill
- Family Farms: Stansborough Farm (Sheep and Alpaca); Blue Duck Station (Sheep and Beef); Tyrone (Sheep and Beef); Balmoral Station (Merino); Retro Organics (Dairy); Wangapeka Downs (Dairy)

OLW- Collaboration Lab Lead Researcher: Bruce Small (AgResearch)

The RRC- Co-Lab project is designed to facilitate and gather data to test a number of hypotheses about the usefulness of Bammer's Integration and Implementation Science framework. This framework recognises that there is little conformity in the design and reporting of interdisciplinary/transdisciplinary projects addressing complex real-world issues. Bammer developed a new science discipline specifically designed to address such issues and implement solutions using collaborative integration of knowledge from multiple disciplines, along with stakeholder local knowledge, to define the problems and co-create implementable solutions.

OLW- TempAg. Lead Researchers: Bill Kaye-Blake (PwC), Meredith Niles (University of Vermont) and Simon Fielke (AgResearch)

Temperate Agriculture (TempAg) is an international network of researchers in agriculture. TempAg is interested in understanding how a resilience threshold might work across different spatial scales and groups of people in such a way that a set of indicators can be normalised by this threshold. The project investigates resilience across four communities in New Zealand. Researchers are creating a dataset of potential resilience indicators from publicly available data, and then exploring communities' understanding of resilience in local workshops. The project will attempt to find relationships between the quantitative data and the qualitative reports from the workshops. The purpose of this project is to conduct research that supports RRC, delivers insights to TempAg, and aligns RRC with the Our Land and Water (OLW) National Science Challenge (NSC).

OLW TSARA Lead Researchers: Ronaldo Vibart (AgResearch) and Bill Kaye-Blake (PwC)
TSARA is expected to run until 2019, and is led by Professor Andy Whitmore from Rothamsted Research. Rothamsted Research will coordinate the whole project and lead a work plan focused on data and modelling. Wageningen University will lead work on developing a typology of farm types and indicators. IDDRI in France will analyse the technical, economic, sociological and political drivers of transition pathways towards sustainability. AgResearch through RRC will provide a contrasting system in New Zealand and will provide data from a network of farms. It will carry out systems modelling and value chain analysis, investigate novel products and practices, and provide and collect data from study farms and long-term soil and land use, all leading to an NZ case study to meet the UN Sustainable Development Goals. The RRC milestones for the period to June 2017 include developing farm typologies appropriate for NZ, and liaising with the Ministry for the Environment, the Ministry for

Primary Industries and other relevant stakeholders to establish a set of NZ agri-environmental indicators compatible with TSARA and the SDGs.

Cawthron Institute is an independent science research organisation, the largest of its type in New Zealand, and offers a broad spectrum of services to help protect the environment and support sustainable development of primary industries. Focus is on aquaculture research, marine and freshwater resource management, food safety and quality, algal technologies, biosecurity and analytical testing.

The Cawthron is leading two social science projects under the Sustainable Seas **National Science Challenge**, one on social license to operate, and another on valuation frameworks and principles.

As part of the MBIE-funded Values, Monitoring and Outcomes research programme, Jim Sinner (Cawthron Institute), Marc Tadaki (University of British Columbia) and others have studied the ways that values are identified, documented and negotiated in freshwater planning, including through collaborative processes. Recent publications include a typology of values and a comparative study of community perceptions of collaborative planning processes in three NZ regions (see *Ecology and Society*). Other publications are available through the Landcare Research website at <http://www.landcareresearch.co.nz/science/portfolios/enhancing-policy-effectiveness/vmo/publications2>.

SECTION 3: RESEARCH USERS' PERSPECTIVE ON RESEARCH NEEDS AND RESEARCH ISSUES

In his introduction to the seminar, Mike Roche identified some of the issues facing academic researchers in the current environment, including issues which were current in the 1990s (see Report Four). Planner Caroline Miller noted that there is a need to make more research applied, because so often planners and local authorities are unaware of the research being undertaken by academics or the Crown Research Institutes.

Local Government

Denise Servante is the Manager Strategy and Community Planning, Rangitikei District Council. She arrived in New Zealand 12 years ago from the UK where she worked in the NGO sector in the Peak District, a stunningly beautiful area which itself has few people – but is the playground to a population of over 16 million people from Greater Manchester and other nearby population concentrations. During her tenure in the UK, social workers from Manchester University undertook a study on “experiencing rural development in rural Britain”, based on case studies which used a social capital model and focused on rural networking. This study culminated in a rural deprivation forum. Denise is using this background in her work in the Rangitikei. This focuses on strategies for attracting and keeping people in the district, particularly older people, Māori and women. There is reluctance to accept that population decline is irrevocable, and the council is working to understand what the future population size of the district is likely to be, and what is sustainable. Focus-group work with the baby-boomer generation identified push-pull factors which either keep people in the district or push them out. More in-depth work is being undertaken by linking with Massey’s Department of People, Planning and Population. Honours students’ projects include:

- Community resilience.
- Developing ‘right size’ recreational facilities (facilities suitable for a district population of 14,000 people).
- How to downsize without jeopardising quality of life: ‘smart decline’ which means remodelling rather than replacing systems such as waste water infrastructure.
- Surveys of older people – what works and what doesn’t for their age group.
- Labour market participation of older people and women.

In conclusion Denise commented that there is a need for rural research. The findings are used in local government planning and project evaluations are particularly important for enabling communities to thrive and be resilient.

Bishops Action Foundation (BAF), Taranaki

The Bishop’s Action Foundation is a charitable organisation that has been working throughout Taranaki since 2005, researching, collaborating and supporting projects that help Taranaki’s communities flourish: in effect a community development vehicle for the region. It focuses on identifying the root cause of community and social issues and developing partnerships to resolve these issues. It has three core action areas: a think tank (which is based on research, identifying opportunities and working to enable people to be more effective in what they are doing), collaboration (acting as the lead to find and bring together the right people/skills for work undertaken), and a service hub (niche areas where the BAF provides administrative support so

reducing overheads for providers where they wouldn't otherwise be able to operate). Current research enterprises include affordable housing, social enterprise, comparative rural community profiling, the development of a rural research centre, the potential of the Anglican Church in rural communities, and an exploration of the concept of spirituality. The focus is on action to support community development and sustainability.

Simon Cayley, CEO of the BAF, noted that the organisation acts as a thinktank on local issues such as rural sustainability. Recent projects include older people, learning more about Taranaki's rural communities, and the opportunities available to local people. By understanding the profiles of the various communities in Taranaki it is hoped that the BAF, other NGOS and local and central government will be able to respond more effectively to community issues. For example, Waitara with a population of 6,500 some 15 km north of New Plymouth lost its freezing works, a major source of employment, three decades ago but has not moved on from this despite massive financial investment. In contrast Oakura 15km to the south is one of the most affluent communities in the district. The BAF wants to understand what is causing these communities to be so different, and how it can best respond.

Simon noted that research to date includes work on social enterprise (and the potential development of a social enterprise hub) as a driver of community-led social sustainability and development. Several such enterprises have been established in Taranaki including a community-led flax-growing enterprise in Waitara. He also noted that while there is road access to the National Park from Opunaki, there is no infrastructure – just a road and then a track, but no information on the area or amenities of any kind. Project Taranaki Mounga (which includes eight Taranaki iwi, the Department of Conservation, and the Next foundation with sponsorship from Shell New Zealand, Jasmine Social Investments, TSB Community Trust and Landcare Research) aims to remedy this. The goal is to find ways to help these enterprises be more effective.

Work is also underway to examine the potential of churches as part of the rural fabric and infrastructure. The approach is based on work done in the UK, while recognising that the New Zealand situation is very different from that in the UK where there is a compelling vision of a 'rural arcadia' which leads urban people wanting to live the 'rural idyll' to relocate in rural areas (often commuting to urban centres to work). Here in New Zealand the research focus has been on farming and improving how we farm, or on coping with farm crises. How can we do more to support rural communities *per se* and rural sustainability, find out more about what research is underway and influence policy.

To obtain a more holistic perspective the BAF is advocating the establishment of a **rural research centre**, possibly similar to the UK's Rural Institute (the Arthur Rank Centre in Warwickshire). This action focused organisation supports people to build on their local resources to develop new streams of income and uses local knowledge to change and develop communities and enhance their sustainability. It is envisaged that the New Zealand rural research centre would be a research hub acting as a clearing-house/repository for rural research and the base of a New Zealand-wide network of rural scholars. Its work would be pivotal in rebuilding New Zealand's expertise and capacity in rural research. The centre would focus on research to support and activate positive change in rural settlements. It would act as a think tank to resolve rural issues including poor housing quality, service provision, and social enterprise and act as a catalyst for policy and action to improve the social, economic, and environmental well-being of rural residents.

Rural GP Network (Linda Reynolds, Deputy CEO)

Background: The NZ Rural General Practice Network was established in the early 1990s by a small group of enthusiastic rural general practitioners to provide a support network for their colleagues. From small beginnings the Network has grown into a professional organisation headed by a chief executive and governed by an executive board made up of currently practising rural GPs, rural hospital doctors, rural nurses, rural nurse specialists, nurse practitioners and business managers who ensure the Network's governance reflect the reality of frontline rural primary healthcare. It advocates on behalf of its members. There are currently 185 rural general practices in the network (2,500 individual members). Formerly mainly doctors, now more nurses and practice business managers are involved. It's a research and advocacy organisation. The Network is part of the Rural Health Alliance Aotearoa New Zealand (RHAANZ), the General Practice Leaders Forum and the National Rural Health Advisory Group.

Key issues are around the sustainability of rural general practice, disparities in the health of rural people and equity of access to health services by rural residents:

- Workforce issues are critical: around 25% of rural practices have vacancies and this will become an even greater issue as GPs retire (it is expected that up to 40% of the current rural GP workforce will retire in the next 5-10 years).
- Equity of access to services by rural people is also an issue. The sustainability of the sector is under threat with communities finding it difficult to fund practices, for practices to provide and staff after hours services, for rural pharmacies to fill staff vacancies, and there is an on-going reliance on international medical graduates to staff rural GP practices¹. There are issues where solo practitioners look after the needs of 700 or more people. While 'more doctors than ever' are being trained, most are averse to (a) choosing general practice and (b) choosing rural general practice. A key question is: Is rural health funding going to the right places at the right time?
- Education is needed for those who will be practicing medicine in rural areas – this includes access to rural training placements for all medical students.
- A further issue for Network members is the need to overhaul and upgrade the PRIME (primary response in medical emergencies) service which was reviewed during 2016-17. The service aims to ensure high quality, timely access to pre-hospital emergency treatment in areas where access to appropriate clinical skills (i.e. to paramedic level) is not available, or where ambulance service rural response times may be longer than usual. The review includes funding arrangements, administration structures, clinical governance and roles, training and appropriate medicines and equipment (for a copy of the report see the Ministry of Health's website www.naso.govt.nz or click [HERE](#)).
- There is a need to work collectively and collaboratively to "care for the land, care for the people" as advocated by Landcare. Network members want more effective communication of scientific findings about land care issues and diseases (including drinking water quality and animal zoonoses) which are problematic for farmers and other rural residents, as well as the general public. Members are looking for a research findings stream at conferences and for collaboration with other entities such as local government to manage issues.

¹ Note article: Kearns R, J Myers and V Adair (2006) What makes 'place' attractive to overseas-trained doctors in rural New Zealand? *Health and Social Care in the Community* 14(6)532-540

Linda identified a need for a stocktake on rural health: to know what services are currently provided by rural practices to their rural communities across New Zealand. The last report comparing the primary health care provided by rural and non-rural General Practices was undertaken by the Ministry of Health over a decade ago.

A major issue of all rural health practitioners is the lack of a fit-for-purpose definition of rural. This is needed to enable accurate data analysis and comparison between urban and rural health care and health status. Until 2014 the Ministry of Health funded rural general practices on the basis of a rural ranking score. Used for 20 years, it was the subject of much contention and little consistency. The new approach defines a general practice as having 'rural status' if it is judged by the local Rural Service Level Alliance Team (RSLAT) as one that is 30 minutes or 30 kilometres from a base hospital which is in a town with fewer than 15,000 people. The RSLAT can make a local decision to include a practice outside these criteria. This definition too is unsatisfactory for research purposes and for making comparisons of health outcomes between rural and urban communities. Linda cited an article published in the *NZ Medical Journal* Vol. 129 No. 1439 pp 77-81 by David Fearnley, Ross Lawrenson and Garry Nixon in 2016 " 'Poorly defined': unknown unknowns in New Zealand rural health" the abstract of which states:

There is a considerable mismatch between the population that accesses rural healthcare in New Zealand and the population defined as 'rural' using the current Statistics New Zealand rural and urban categorisations. Statistics New Zealand definitions (based on population size or density) do not accurately identify the population of New Zealanders who actually access rural health services. In fact, around 40% of people who access rural health services are classified as 'urban' under the Statistics New Zealand definition, while a further 20% of people who are currently classified as 'rural' actually have ready access to urban health services. Although there is some recognition that current definitions are suboptimal, the extent of the uncertainty arising from these definitions is not widely appreciated. This mismatch is sufficient to potentially undermine the validity of both nationally-collated statistics and also any research undertaken using Statistics New Zealand data. Under these circumstances it is not surprising that the differences between rural and urban health care found in other countries with similar health services have been difficult to demonstrate in New Zealand.

Linda reiterated that this is a problem given information derived from other data sources – see below.

The Rural Health Alliance Aotearoa New Zealand (RHAANZ) was established in 2012 to improve the access of rural people to safe, effective and acceptable health services. It connects a myriad of organisations with an interest in health (of people, animals and environmental health) and well-being in rural communities – and represents a much wider sector than those just engaged in medical issues. The alliance has among its 44 member organisations: 14 district councils, many community groups and NGOs (such as Rural Women NZ; Federated Farmers; Farming Mums NZ; Dairy Women's Network; Eldernet; St John Ambulance; Local Government NZ; Rural Contractors NZ; Telecommunications Users Assoc. TUANZ; Mobile Health (day surgeries); Young Farmers), Industry Training Organisations, Rural Support Trusts, as well as health groups (including the NZ Rural GP Network; Rural Hospital Network; NZ Institute of Rural Health; Pharmacy Guild of New Zealand; Mental Health Foundation; the College of Nurses Aotearoa; the Royal NZ College of General Practitioners; Division of Rural Hospital Medicine NZ; Australasian College for Emergency Medicine – Rural and Regional Remote Committee; NZ College of Midwives; NZ College of Clinical Psychologists; and several Primary Health Organisations), the animal health sector (animal health issues, and treatments also have implications for human health –

members include the NZ Veterinary Association), corporates (such as Bayer; Beef + Lamb; Dairy NZ; Fonterra; Grochem; Skellerup; KPMG; Fegan & Co (rural recruitment and HR); NZ Health IT; NZFarmer; Vodofone), government agencies such as Worksafe NZ, two Universities (Otago and Massey) and more.

Each member organisation nominates an individual to the representative body, and 12 of these are elected (or appointed) to Council (the governing body). Five Council members with the requisite skills are then appointed to the Executive committee which has oversight of the organisation. In 2013 the Council developed a strategy (A Rural Health Road Map) to influence government policy affecting the health and wellbeing of rural communities. To do this requires good quality research and data – which is lacking. Following the downturn in dairy prices and concern that this might morph into a spate of suicides, job work also includes suicide prevention activities.

CEO Michelle Thompson (who is also a beef farmer in Hawkes Bay) notes that there is a lack of data, research and knowledge of the health outcomes of rural New Zealanders, and this results in poor accountability across Government, District Health Boards, and Primary Health Organisations. The Alliance asked Otago University's Department of General Practice and Rural Health to carry out a literature review on rural health in New Zealand and rural health outcomes for the period 1946 to 2016. They found 38 articles: mostly written prior to 2000 and mostly on cancer. Using the same parameters for research undertaken in other countries, during the same time period, they found that Australia had produced 4,000 articles, Canada 2,000 and Scotland (with a slightly larger but comparable population to New Zealand) had published 600 articles. There are massive gaps in our knowledge about the health of rural people, including on aging in place, palliative care, dementia, children, obstetrics and gynaecology.

Research from Australia has shown that there, on a per capita basis, health expenditure on rural people is \$2 billion less per year than for urban people. We can't do similar research as we don't have the data. We know anecdotally that rural people in New Zealand have poorer access to care and suffer poorer health status and health outcomes compared to their urban counterparts. Once diagnosed, rural people unquestionably face greater challenges and costs to access health services and specialist treatments. There is maldistribution of the health workforce with some less popular rural areas in a constant battle to maintain their services, and indicators, such as cardiac arrest figures collected and held by the St John ambulance service, show that in rural areas there are longer response times and poorer health outcomes. Poor connectivity in rural areas also doesn't help.

RHAANZ has gone beyond identifying priority actions. Marie Daly also spoke of the advocacy work the Alliance is doing at the government level and the actual operationalising of the national health strategy in rural places. For example, 50 safe-talk workshops were held as part of the effort to reduce suicides. Consultation with member organisations and with rural communities across New Zealand (including Māori communities) has now led to the development of a rural mental health and addictions strategy and action plan. The Alliance is addressing the problem that the performance-based measures used by the Ministry of Health (such as age and ethnicity) don't help quantify the problem for rural people, or answer questions about how rural people fare compared to urban residents. In other words, there is no information on where people with various issues including mental health and addiction issues, live. This means the issue cannot be properly articulated and detailed. The Alliance is aware that funding is tight so in not asking for new money, just a new way of looking at existing data sets already collected. By using locality information that is available on each patient record, base-line statistics can be generated, rural outcomes can be made visible and issues addressed

SECTION 4: ISSUES IDENTIFIED IN THE FINAL SESSION

An ongoing issue for both the Alliance and the Network is how rural areas are defined in the health context in New Zealand. A Rural Health Alliance road map was developed for release in March 2017 after a major consultation programme with member organisations. This road map seeks government agreement to a definition of 'rural' relevant to the health and social needs of rural communities which would enable consistency across government and the wider sector and would systematise the capture of data across government Ministries based on the 'rural' definition. In addition to rural research and policy, the RHAANZ road map also has sections on rural well-being, rural connectivity, rural health services, and the rural health workforce (see <http://www.rhaanz.org.nz/wp-content/uploads/2017/07/Rural-Health-Road-Map-2017-A4.pdf>).

Some of the key actions identified under the 'rural research and policy' section of the RHAANZ road map (which echo the concerns identified by Simon Cayley above, as well as those outlined by Linda Reynolds) include:

- Agree a definition of 'rural' relevant to the health and social needs of rural communities enabling consistency across government and the wider sector.
- Systematise the capture of data across government Ministries based on the 'rural' definition.
- Establish a 'rural proofing' tool to work across Government to reduce unintended consequences on rural communities of policy change, agri-business decisions and decisions made by industry corporates who are, or who have, received Government support in one form or another.
- Establish a rural research budget and associated process to build capacity and baseline levels of knowledge.
- A rurally based, inter-professional training programme that grows the teaching and research capacity on rural issues.

Definition of rural

Real problems were identified with the current definition of rural: It's recognised that there are about 250,000 people who are regarded as urban, but who in fact access rurally located health services. Applying a filter to understand where people are located and understanding the access issues they face in obtaining services at different levels would make a significant difference in resolving issues. Currently because so many people are omitted from data sets, none of the rural health data used by the Ministry of Health meets the statistically significant threshold, so rural issues continue to be ignored. This is particularly critical not only for mental health services, but the whole gamut of health issues.

It is hoped that the new way of seeing rural New Zealand being introduced by Statistics New Zealand in its paper *Statistical standard for geographic areas 2018* will make a difference in this respect. In its new classification Statistics New Zealand aims to define rural and urban areas on a 'form' basis through what can be seen on the ground, with urban areas redesigned to represent the actual urban 'footprint' i.e. areas of high population density. Previously urban areas took in the surrounding commuting zone, often including large rural spaces within urban areas. The proposed new approach classifies rural areas in terms of their relationship to urban places: the urban influence factor. It is to be hoped that distinctions are made between the size/functionality of the urban influence. That is, it needs to be

recognised that cities' peri-urban hinterlands have more choice of services and amenities than do the rural hinterlands of minor-urban areas, and account needs to be taken of factors such as river and mountain crossings which isolate areas that would otherwise seem to be close to a city.

Operational issues

In addition to issues around staff vacancies, health and other professionals working in rural areas find it very difficult to access professional development. Professionals living and working in rural areas who are unable to travel four or more hours for refresher courses, or for moral and professional development support are less able to maintain their skills at the highest level and lose the capability to provide highest quality services.

Rural and small-town residents are concerned that retiring medical practitioners, educators and other professionals are not being replaced.

Obtaining evidence

Analysis and reporting of cross-agency data on a locality basis is needed to increase accountability, and enable research and evaluation. The knowledge would be used to inform targeted, evidence based interventions and service development relevant to rural communities. The information gathered can be applied to measuring the impact of Government policy on rural communities, allocating resources, and targeting service development and provision. Understanding the issues requires data which identifies whether in fact, as suspected, there are higher levels of, for example, dental caries in the teeth of children living in rural areas, and what the differences are in the level of domestic violence and suicides in rural places compared to urban ones.

Effectiveness of evidence – are the outcomes sought being achieved?

Comprehensive and accurate outcomes data about rural people is needed to inform community development, resource allocation and health and social service provision. The solution is for data to be collected at every point of contact with health and social services and for this data to be linked to where people live.

The issues confronting rural areas have been magnified because of decisions made by both the government and large corporate employers, without consideration of the downstream impacts. For example school closures and the centralisation policies of the eighties have unnecessarily decimated many rural settlements. Iwi-owned enterprises operating in rural areas often look beyond the financial bottom-line to consider the social implications in their decision-making. The 'rural-proofing' tool which was developed by the Ministry of Agriculture and in use about 15 years ago needs to be reinstated. This requires all policy (and Cabinet papers) to be reviewed in terms of its impact on rural residents.

Establishment of a rural research institute in New Zealand

An independent rural body is needed to consider and lead research on rural issues. Both the BAF and the Rural Health Alliance advocated for the development of a rural research institute. About twenty years ago there was a strong rural social science research component feeding into policy action. A change of government, however, meant as had happened forty years before, the work ceased. Clearly an independent research agency is needed if longevity of rural social research is to be sustained. Simon Cayley's organisation has been working to this end for some years. The Bishop's Action Foundation

states in its website that in its efforts to better understand the socio-economic, cultural, environmental and spiritual issues that impact the wellbeing of rural communities: “we realised there was little to no information or social research on rural New Zealand over the past two decades. Our goal was to fill this gap, so that any further policies or actions taken regarding rural communities would be made with knowledge and research behind it”. The BAF has been working with a range of partners with the aim of creating a research institute for rural wellbeing. “This institute would focus on rural communities and rural life and would both inform and support initiatives that sought to respond to rural needs” <http://www.baf.org.nz/2017/04/02/rural-research-centre/> . Simon notes that such a centre has been successfully operating for some time in England – The Arthur Rank Centre. “This offers a good operational model to base the development of the proposed research centre on”. The Arthur Rank website is somewhat reticent about its research work but offers useful resources for communities interested in undertaking research to address local needs. For example: <http://s3-eu-west-1.amazonaws.com/arcentre/wp-content/uploads/2016/12/12115419/ERM-Researching-your-Community-Mar-17.pdf>. Annex 2 contains a list of rural research organisations operating in the UK and elsewhere. Rapid Rural Appraisal and particularly Participatory Rural Appraisal are also useful for providing guidance and techniques for enabling outsiders to learn from local people (see for example, <http://www.participatorymethods.org/glossary/rapid-rural-appraisal-rra>).

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Annex 1: ATTENDEES AND APOLOGIES

Attendees

1. Mike Roche (Geography, Massey University)
2. Ann Pomeroy (Centre for Sustainability CSAFE, Otago University)
3. Sean Connelly (Geography, Otago University)
4. Caroline Miller (School of People, Environment and Planning, Massey University)
5. Janet Reid (Institute of Agriculture and Environment, Massey University)
6. Jane Richardson (for Natalie Jackson et al.) (Demography, Waikato University)
7. Margaret Brown (AgResearch, People and Agriculture Team)
8. Nicholas (Nick) Craddock-Henry (Landcare Research)
9. Andrea Grant (SCION)
10. Peter Edwards (SCION)
11. Linda Reynolds (GP Network)
12. Michelle Thompson (Rural Health Alliance Aotearoa New Zealand)
13. Marie Daly (Rural Health Alliance Aotearoa New Zealand)
14. Ryan Morrison (Eastbay REAP)
15. Simon Cayley (Bishop's Action Foundation, Taranaki)
16. Denise Servante (Strategy and Community Planning, Rangitikei District Council)
17. Tracey Collis (Taranua District Council, Dannevirke)

Unable to attend – sent apologies and info

1. Alison Loveridge (Sociology, Canterbury University)
2. Caroline Orchiston (Centre for Sustainability CSAFE, Otago University)
3. Charles Crothers (Sociology, Auckland University of Technology)
4. Chris Rosin (Faculty of Environment, Society and Design, Lincoln University)
5. Dick Bedford (Royal Society NZ; Geography and Demography, Waikato University)
6. Etienne Nel (Geography, Otago University)
7. Gail Adams-Hutcheson (Geography, Waikato University)
8. Harvey Perkins (Geography, Auckland University)
9. Hugh Campbell (Sociology, Otago University)
10. Jane McCabe (History, Otago University)
11. Jim Sinner (Cawthron Institute)
12. KatyAnn Legun (Sociology/CSAFE, Otago University)
13. Lisa Langer (SCION)
14. Mary Sparrow (formerly Waimakariri District Council)
15. Mike Mackay (Sociology, Lincoln University)
16. Nick Lewis (Geography, Auckland University)
17. Peter Holland (Geography, Otago)
18. Richard le Herron (Geography, Auckland University)
19. Robert Peden (Historian, Robert Peden Research)
20. Simon Fielke (Ag Research)
21. William Smith (formerly, Geography, Auckland University)

Apologies

1. Alison Broad (formerly REAP)
2. Audrey Van Der Monde (Hurunui District Council)
3. Carolyn Morris (Sociology, Massey University)
4. Cilla Wehi (Landcare Research)
5. Jon Manhire (Agribusiness NZ)
6. Katie Pickles (History, Canterbury University)
7. Lisa Langer (Social and Cultural Research Group, Scion,)
8. Dame Margaret Millard (Rural Women, Rural Support Trusts)
9. Natalie Jackson (National Institute of Demographic and Economic Analysis, Massey University)
10. Penelope England (Rural Women NZ)
11. Robin Kearns (Geography, Auckland University)
12. Ruth Panelli (formerly Geography Otago University, now rural social worker)

Annex 2: RESEARCH INSTITUTES

A range of rural research institutes operate overseas. They include:

- The Arkleton Trust, a private research organisation based in the Scottish Highlands near Inverness, and in Reading. It was founded in 1977 to study new approaches to rural development and education and improve understanding between rural policy makers, academics, practitioners and rural people. In 1999 the objectives of the trust were changed to: advance education for the public benefit in the development of new methods and techniques directed towards the alleviation of poverty in rural areas and the impact of environmental and social factors upon poverty and other social problems common to rural areas. In more recent years the focus of research has shifted to Africa. An example of the kind of work their members produce is available at: <https://arkletontrust.co.uk/think-piece-rural-resilience-insecurity/>
- The Highlands and Islands Development Board (HIDB), funded by government, was established in 1965 to reverse generations of depopulation and economic decay throughout much of the north of Scotland. When the Board dissolved in 1992 it was replaced by Highlands and Islands Enterprise (HIE). HIE's role is to develop sustainable economic growth across the region. It achieves this by creating infrastructure for future investment, assisting businesses with their growth aspirations, and supports the strengthening of communities, particularly in fragile areas by assisting communities to acquire and develop land and other assets. HIE also invests in transformational projects to make the Highlands and Islands a more competitive and attractive place to live and work. It is deemed to have succeeded in its objectives with a 20% increase in population (compared to only 3% for the rest of Scotland), and lower unemployment than elsewhere in the UK. <https://www.holyrood.com/articles/feature/highlands-and-islands-enterprise-fit-future>.
- In a 1991 conference paper, Little (1991:107-8) mentions the work of universities in Sweden and the United States of America, where the 'action research' of academics working alongside rural business people and social entrepreneurs has mobilised rural communities, and stabilised rural economies. She noted that the right institutional arrangements are an important pre-requisite for effective rural policies. She noted at that time that OECD members counties (but not New Zealand), "treat the rural economy as an economy in its own right. For that economy to contribute to the national economic performance the rural economy should first be understood in terms of its own characteristics and capacities. Rural research becomes the key".
- Rural Development Institute, Brandon University Canada: Brandon University established the Rural Development Institute (RDI) in 1989 as an academic research centre and a leading source of information on issues affecting rural communities in Western Canada and elsewhere. RDI functions as a not-for-profit research and development organization designed to promote, facilitate, coordinate, initiate and conduct multi-disciplinary academic and applied research on rural issues. The Institute provides an interface between academic research efforts and the community by acting as a conduit of rural research information and by facilitating community involvement in rural development. RDI projects are characterized by cooperative and collaborative efforts of multi-stakeholders. A paper prepared in 2017 itemises other university based rural research institutes and think tanks in Canada. <https://www.brandonu.ca/rdi/files/2017/05/RDI-CDN-Based-Universities-Rural-Research-Centres-Final.pdf>