

Final Impact Report 2018–2022



Contents

Forew	ord		2	4.7.7 Community development projects		
1. Executive summary			4	head yakka/musical trails/		
2. Context			5	0 ,	36	
3. Report structure			5	4.7.8 Fight Food Waste CRC Project Proposal: Horticulture waste streams		
4. RECoE director's report, learning from the past and vision for the future				•	38	
			6	4.7.9 Burnett Inland – Chad Renando (USQ)	38	
4.1	Five themes		6 10	4.8 Future RECoE focus areas	39	
4.2				4.9 Future operational and governance		
	4.2.1	Economic tools	10		40	
	4.2.2	Regional innovation	12	4.10 Succession: Building future capability	ity	
	4.2.3	Value chains	15	within the RECoE research partners	41	
	4.2.4	Policy and governance	18	4.10.1 PhDs commenced and completed	42	
	4.2.5	Engagement and translation	20	5. Methodology for the evaluation	50	
4.3	Covid	and RECoE	23	6. Results of the evaluation		
4.4	RECoE's strengths		24	6.1 Table of deliverables	52	
	4.4.1	Place-based approaches, working with communities	24	6.2 2019 Economic Development Workshop – participant feedback	52	
4.5	RECoE's weaknesses			6.3 Stakeholder feedback	58	
4.6	4.6 Where does RECoE fit in the regional			6.3.1 Organisational efficiency and		
and rural development landscape?			28		58	
4.7	Projects beyond the original DAF contract		31	6.3.2 Personal benefits from RECoE		
	4.7.1	Sheep meat value and supply chains	31	activities	61	
	4.7.2	Renewable energy and regional		6.3.3 Benefits to the region	62	
		communities: AGL and Coopers Gap Windfarm	32	6.3.4 Suggestions and comments	69	
				7. Evaluation conclusions	74	
	4.7.3 Quilpie Wellspring: Al approach to placema regions	Quilpie Wellspring: An innovative		8. RECoE financial summary	80	
			33	9. Table of milestones and achievements 8		
	4.7.4	Drought Resilience Leaders (ARLF/FDF)	34			
	4.7.5 Future Drought Fund: Drought					
		innovation and adoption hubs	35			
	4.7.6	Decarbonising Queensland: An inclusive and resilient low				
		carbon economy	36			

Foreword

Home to a \$23 billion primary industry sector with its 68,000 jobs and \$11 billion in exports, our rural economies are an essential element of Queensland's current and future prosperity. An internationally competitive, future-focussed, and decentralised Queensland necessarily requires its rural economies to be productive, proactive, and growing. And for that to continue, we need strategy, investment, innovation, new capacity, and focussed action.

This thinking lay behind the Queensland Government's commitment in 2017 to provide \$3 million over 3 years to establish a Rural Economies Centre of Excellence (RECoE). The Queensland Government set the objective of the RECoE as undertaking integrated applied research informing policy and strategy as well as providing specialised extension and engagement programs aimed at boosting the sustainable growth of Queensland's rural economies. This approach by government emphasised also a preference for collaboration between local research institutions and the full mobilisation of available expertise in the service of Queensland communities.

Establishing the Rural Economies Centre of Excellence thus became a leading example of 'Team Queensland' working together. In response to an invitation from the Department of Agriculture and Fisheries, the Institute for Resilient Regions at the University of Southern Queensland built on its own interest in participating by brokering a consortium of complementary capacity from James Cook University, Central Queensland University, and the University of Queensland. The outcome was a regionally representative and capable research and extension platform with internationally credentialled research, analytical, and dissemination capacity.

The purpose of the RECoE was to generate expert information to help Queensland's rural economies strategically position themselves to deal successfully with the challenge of achieving sustainable growth, particularly in a fast-changing world. The issues framing this aspiration are complex and asking the right questions remains crucial in setting the best investment and development agenda. From the start, the big question for RECoE was "How best can innovation, integration of capacity, inter-sectoral collaboration and a strategic multidisciplinary approach to industry, community and regional development deliver a thriving and internationally competitive rural economy?" It was a big hairy audacious question that was broken into several major themes around which were structured research and extension programs.

RECoE's program emphasis focussed initially on rural entrepreneurship and skills development, strategic initiatives to stimulate technological development, and new models of business, innovation, and marketing. The nature of our collaboration was to complement expert economic analysis and econometrics, business expertise and networks, and close engagement and partnership with a wide range of regional and rural economic stakeholders.

An industry Advisory Committee comprised of a cross section of leaders from the sector as well as independent regional development experts provided valuable assistance to the Board of Management in define the priorities and pathways for the development and implementation of the RECoE.

As this Final Impact Report 2018–2022 outlines, the RECoE has more than delivered on the expectations set it in a deed of grant by the Queensland Government.

True to its commission, the RECoE has provided thought leadership, rural policy analysis and extension services to rural communities and enterprises across Queensland. There is much more to be done though and it was always the aim that RECoE would extend beyond the terms of the DAF grant to achieve a life of its own in creating the knowledge, skills and evidence needed for a proactive and competitive rural economy in Queensland. To that end, I commend this report to stakeholders and trust that further collaboration between the RECoE partners will continue to add value in matters as varied as public policy, industry and regional development, and stakeholder engagement.

I was privileged to chair RECoE's foundational Board of Management and its Industry Advisory Committee and acknowledge and thank the dedicated involvement and contributions of colleagues from the Department of Agriculture and Fisheries, the University of Queensland, James Cook University, the Central Queensland University, and the University of Southern Oueensland. RECoE demonstrated what could be achieved when universities put aside their individual agenda to work together for a common good outcome. Our shared achievement was realised in the interest and involvement in our programs of the hundreds of stakeholders from farmers, regional communities, local and state governments. The benefits they attest to affirms indeed the continuing relevance of the RECoE initiative.



Professor Emeritus John Cole OAM Inaugural Chair 2018-2021 **Rural Economies** Centre of Excellence

1.

Executive summary

The Rural Economies Centre of Excellence (RECoE) was established as a collaboration of four Queensland universities (University of Southern Queensland, Central Queensland University, James Cook University and University of Queensland) in late 2017. Initial funding was provided and objectives were formalised in a contract between University of Southern Queensland and Queensland Department of Agriculture and Fisheries (QDAF). The contract established RECoE's strategic direction by listing the milestones to be achieved. The final milestone was an evaluation of the centre's outcomes and impacts, and this document is provided to satisfy that milestone.

This document satisfies the final contract milestone by combining two activities. One is a reflection and final report prepared by RECoE's Director, and the other is an evaluation of outcomes and impact led by an independent researcher.

RECoE has successfully aligned activities of the four universities to achieve all the milestones in the original contract. In addition, RECoE has made contributions to Queensland rural and remote communities by undertaking community development and research activities that were not contained within the QDAF contract, but which allowed RECoE to utilise its skills and resources to facilitate and learn from projects designed to contribute to the resilience and wellbeing of regional communities.

Feedback from stakeholders and participants indicate high levels of satisfaction with RECoE as an organisation, and it is seen as a very useful integration of academia and commerce with an orientation towards facilitating change and achieving outcomes for and with regional communities.

The final review notes that many of the milestones established in the original contract were transactional in nature, such as the writing of reports and papers. However, feedback from stakeholders and participants suggested they mostly valued more transformative outcomes that had been facilitated by RECoE, such as empowerment of communities to take responsibility for planning within their own regions.

Drawing on the feedback provided from stakeholders and participants and the experience gained since RECoE was established, RECoE proposes to adopt a higher level of deliberate focus on transformational activities in the future. Of course, the transactional activities of conducting research and documenting results in the form of reports and published articles will remain important, especially to individual academics and university partners. However, RECoE has observed that activities that empower and equip communities to take responsibility for planning and influencing development within their regions are well received by communities. This also provides an opportunity for RECoE to differentiate itself, and to contribute to regional and rural wellbeing, resilience, sustainability, and prosperity. RECoE will adopt a broad definition of the term 'communities' and may become involved with communities of business people, specific industry representatives, or regional communities of people who seek to collaborate to achieve improved financial, social and environmental outcomes. RECoE will also consider a broad range of activities to guide, support, facilitate, train, empower and equip communities to take responsibility for planning, influencing and implementing their own futures. RECoE's proposed future direction and strategy is currently being prepared and will be documented with input from stakeholders. The acceptance of this document by QDAF completes the achievement of milestones by RECoE under the initial QDAF/USQ contract.

2. **Context**

This report has been prepared to satisfy Milestone 8.4 of the agreement between Queensland Department of Agriculture and Fisheries and University of Southern Queensland to establish and maintain the Rural Economies Centre of Excellence. Milestone 8.4 was the final milestone and required RECoE to prepare a final report for RECoE Phase 1, including evaluation of outcomes and impacts for Queensland Rural Economies.

3. **Report structure**

The milestone set in the QDAF/USQ contract required an evaluation be conducted and incorporated into a final report. This document satisfies this requirement by providing:

- A summary of the achievements prepared by RECoE's Director, Associate Professor Ben Lyons and included in Section 4.
- · An evaluation of outcomes and impact included in Sections 5-7. The evaluation was led by an independent researcher, Dr Phillip Currey. The evaluation of outcomes and impacts involved a number of activities including (i) identifying that each of the contract milestones had been delivered, (ii) reviewing feedback from participants who had been involved in activities facilitated by RECoE, and (iii) semi-structured interviews with regionally-based stakeholders and participants to understand their perceptions of RECoE's impact and outcomes.



4.

RECoE director's report, learning from the past and vision for the future



Ben Lyons, RECoE Director

4.1 RECoE establishment

RECOE was originally set up in response to the State Government bid by the Department of Agriculture and Fisheries (DAF), under then minister Hon Bill Byrne, to focus on rural communities and issues. The original intention was to set up a policy think tank informed by robust economic analysis with the ability to apply a place-based approach to regional issues. Research findings were to be fed back to government as well as on the ground practitioners working in this sector.

The original RECoE bid was won by three regional universities; James Cook University, Central Queensland University and University of Southern Queensland. A second bid from the University of Queensland brought the four institutions together to form RECoE.

The University of Queensland bid was led by the economics department based at St Lucia under Professor John Mangan. This economic analysis capacity would complement the place-based knowledge of the three regional universities.

This original contract was somewhat transactional, with milestones set out for every three months. This contract was revisited following the appointment of the RECoE director at the University of Southern Queensland, and milestones extended to a timeframe of six months. In mid-2018, RECoE appointed an industry advisory group, with members selected based on geographical and industry criteria. This consisted of seven regional individuals from Queensland and interstate, including a former CEO of the Regional Australia Institute, and the general manager of an investment corporation.

The original set up and early operations of RECoE were made possible by the existing relationships between key leaders at each university, as well as growing relationships with DAF. There were some inconsistencies regarding the purpose of RECoE between the universities and DAF, which is an inevitability in the set-up of such a diverse and far-reaching research centre. Solutions and ways to address this varied between RECoE research managers and the advisory board. To determine the best path forward for a cohesive RECoE, Professors John Rolfe, John Cole, Jim Cavaye and Allan Dale put together an issues paper¹, so that all issues could be clearly identified and considered. This issues paper formed the basis for RECoE's research program in this initial phase. This paper should be revisited at this juncture, so that RECoE can reflect as a research centre on its ability to address these issues, and how to recruit researchers who will enhance their ability to deliver on current and future contracts with DAF.

Any start up or initial organisational activity is challenging, and the early stages of RECoE was not without these challenges. In particular, the challenge of whether RECoE had the capability across four universities to deliver on these projects to a high standard, and how the universities could collaborate to achieve this.

An early challenge was to find researchers that fitted the criteria, in both capability and capacity, that were set out in the deliverables and outputs section of the initial milestone table.

The experienced leadership across all four universities enabled RECoE to overcome the disparate nature of intentions and issues with the original contract. The growing pains towards maturity in a dynamic core research team slowly congealed into a workable unit owing to this early alignment of purpose across the leadership group.

In the early days, governance was set up with quarterly meetings alternating between each university, generally in Toowoomba, Brisbane, Emerald/Rockhampton and Cairns. For the first 12 months of RECoE, from late 2018 to late 2019, there was a focus on the director, leaders and researchers engaging with each other and travelling to regional areas. The purpose of this was to contextualise research projects and to understand how regional projects can effectively be undertaken in this environment. Given the university setting, researchers had the opportunity to learn from people already working on regional issues. Professor Hurriyet Babacan was appointed as Research Director in Q2 2019 to assist with project research quality and the contract deliverables.



¹https://www.ruraleconomies.org.au/top/research-papers/rural-economic-issues-a-background-paper/?month=June&year=2019&day=11

continued

An example of early engagement that was quite serendipitous is Dr Chad Renando's work on regional innovation ecosystems, focused on the enterprise level. Regional innovation is one of RECoE's five themes, and the future model of this theme looks at helping enterprises with innovation. Dr Renando and Director Ben Lyons further exemplified this theme in relation to ecosystem building with an AgTech feasibility project in Goondiwindi. In addition, an existing project collaboration with JCU and USQ in the Communities in Transition project led by Professors Allan Dale and John Cole in six regions across the state aided the development of place-based project ideation.

The partnership with UQ's Business Economic and Law School was not as familiar to the regional university leadership group, as previous collaborations were generally with the UQ Gatton Campus and the School of Agriculture and Food Sciences. Another challenge occurred in the early days when Professor John Mangan, the initial applicant from UQ, was no longer available.

Over time new relationships were fostered and this challenge overcome, but this did take time after RECoE's initial establishment. The leadership of Professor Brent Ritchie as UQ's RECoE representative was instrumental at this juncture.

The universities were initially grouped and put in charge of different themes (five in total based on the issues paper). UQ looked at economic tools and lead regional innovation, CQU looked at value chains, JCU focused on policy and governance and USQ oversaw translation and engagement. Translation and engagement activities out of USQ focused on place-based workshops, webinars, the creation of a rural leadership fellows' program and annual forums. However, 'ownership' of the regional innovation theme shifted towards USQ due to personnel changes at UQ and the need for a more regional level focus as opposed to enterprise level innovation research.



The RECoE leadership group meeting the Minister for Agriculture and Rural Communities Mark Furner after our first year of operation in August 2019



In the middle of June 2019, the management meeting was held in Rockhampton, where the entire portfolio was allocated against themes, and subsequent projects set up. This included topics such as water security and rural economies undertaken at UQ, as well as energy transition and rural economies projects undertaken by UQ with support from USQ. Topics also included agritourism potential in the Granite Belt, environmental offsets and further focus on regional innovation ecosystems.

Three key projects were undertaken under the theme of value chains. These were aquaculture (focusing on oyster supply chains in Queensland), horticulture ownership models and beef consumer trends. At this point, small research groups emerged at each university that were RECoE focused, with primary lead researchers in each location. The experience of researchers at JCU helped the policy and governance theme develop quickly. Early papers included the topics of digital connectivity, de-risking rural investment and rural population and workforce issues.

4.2 Five themes

RECoE operates under five themes; economic tools, regional innovation, value chains, policy and governance and engagement and translation. Work completed by RECoE is generally classified under these themes. Please find below the five themes and our major research projects.

4.2.1 Economic tools

Economic tools led by UQ was a key pillar and theme for RECoE with economic modelling and critique of existing analysis the main activities.

Irrigation from the Boyne River: the value of improved water security

The Boyne River Irrigation Area in South East Queensland includes approximately 30 irrigators growing a diverse range of agricultural products (See figure below). These include high-value horticultural field crops such as watermelons and pumpkins, perennial horticultural tree crops such as mandarins and pecans, perennial blueberry shrubs and irrigated pastures for cattle fattening. The irrigation area relies on water stored in the Boondooma Dam near the town of Proston. This study provides a broad context for the economic contribution of the irrigation industry and an assessment of improved water reliability per se. The study consists of two components - a largely qualitative assessment of the current issues and potential advantages of improved water reliability, and an Input/Output economic analysis. The potential benefits of the improved reliability of irrigation extend beyond agricultural production and its service sectors. It can also provide the opportunity for the North Burnett region to diversify its economy, have higher skill employment that retains young people in communities, have value-adding to primary industries and improve entrepreneurship and the liveability of the region.

Exploring tourism and wine industries contributions to the regional economy

The Southern Downs Region, of which the Granite Belt is a significant part, hosts over 800,000 visitors per year who visit national park and wine and food attractions. Considerable background on the tourism industry in the region has been provided in the report Southern Downs Tourism Market Research Program (EarthCheck, 2018). However, that report does not explore the interactions between tourism attractions, linkages to the agricultural industry in the region or opportunities for and barriers to the tourism industry in the region. The Granite Belt is the larger of Queensland's two wine production regions and significant expansion has occurred over recent years. The aim of this project is to provide a better understanding of regional tourism attraction clusters by exploring the economic benefits from national park and wine tourism and the interactions between those attractions in providing a 'critical mass' of attractions for tourists. Central to this understanding is exploring the opportunities and barriers to wine producers offering farm-based tourism, accommodation and cellar-door wine sales in providing farm income and in stabilising returns across years. A secondary aim is to develop and pilot a data collection methodology for wine producers that will provide sufficient data for our study but also provide a format for future data collection and analysis on an ongoing basis.

Maximising the value of the energy transition for rural and regional Queensland

The energy landscape in Queensland is diversifying with implications for regional Australian agribusiness, industries and communities. The development of large-scale renewables projects is increasing rapidly representing a significant form of infrastructure investment for rural economies. Assessing the changing energy landscape including the broader impacts to rural communities and economies is, therefore, critical to inform stakeholders and maximise the value of the energy transition for regional Australia. This research



project maps the emerging energy landscape in regional Australia, identifying implications and opportunities for agribusiness, irrigation and other primary industries. The study also examines the economic, social and ecological impacts of large-scale energy and renewables projects through the comparative analysis of a number of projects within Australia. Outputs include a decision-making support tool for local government and best practice guidelines for development of new energy infrastructure which maximise benefits for rural communities supported by rigorous academic.

Examining innovative policies to sustain environmental offsets in rural communities

Carbon farming and the creation of environmental offsets is not only an important activity to control emissions and enhance the environment and biodiversity, it is also of increasing importance within the rural community in providing a more diversified portfolio for agribusiness.

The importance of offsets can be observed as they are the key climate policy to control carbon dioxide emissions within Australia, using the \$2.5b Emissions Reduction Fund (ERF). This project will investigate the effectiveness of current offset policy on specific rural communities (Granite Belt) and consider if more efficient and sustainable policies can help improve the uptake and resilience of the agribusiness sector, specifically small- and medium-sized agribusiness owners that often find current policies restrictive. This project will consider carbon farming intensive areas as well as the potential to open up new activities within the sector across Queensland. This project will use Cost-Benefit Analysis and non-market valuation to consider the current net benefits of offsets to all stakeholders in Australia. including specific local communities and examine how more effective polices can improve the uptake of carbon farming in these rural communities. This project was aligned with the agritourism project developed above by Driml and Brown².

² https://www.ruraleconomies.org.au/economic-tools/exploring-tourism-and-wine-industries-contributions-to-the-regional-economy/

4.2.2 Regional innovation

Innovation in regions evolved into looking at regional responses to developing and facilitating at a regional level as opposed to enterprise level – working on methodologies to build regional ecosystems and communities working in collaboration was an important outcome of this portfolio and was jointly led by USQ and UQ. An important precursor to the drought planning and oncoming decarbonisation initiatives coming from government (but designed to be place-based in their leadership and implementation).



Quilpie WellSpring: a circular economy concept for remote and arid regions

Quilpie Shire is located in South-West Queensland, approximately 1,000 km west of Brisbane and has a population of 790, of which 654 reside in the town of Quilpie. Inspired by Quilpie's existing tourism and lifestyle image as an oasis in the arid outback landscape, the theme of water and its smart use in the Outback was adopted as the focus for new ideas attract local business and employment. Using a best practice approach to sustainable development and circular economy principles, Quilpie Wellspring provides a vision for new micro enterprises clustered on a 3.9 ha site in the heart of Quilpie. The mixed-use precinct is planned as a fivestage project with stage one being three new enterprises providing solar distilled water from the Great Artesian Basin, local craft beer and fresh aquaponics produce of local fish and vegetables with supporting arid food forest, ecological lagoon and public open space.

Mutual ownership solutions for regional infrastructure innovation

The concept of mutual ownership as a catalyst for regional growth and self-sufficiency, is under explored in Queensland. Mutual ownership of infrastructure and/ or equipment, led by primary producers or community groups, has the potential to drive regional digital innovation, and to facilitate the adoption of ag tech and sound agriculture practices across a range of industries.

This project seeks to develop new business models and funding alternatives for mutual ownership of infrastructure in regional Queensland. As a starting point, the project will use cluster fencing as a case study of mutual ownership. In Central West Queensland, mutual (shared or collaborative) ownership of cluster fencing infrastructure is applied as part of a resilience strategy, to increase sheep numbers and create sustainable agriculture jobs to retain families in the region that has experienced out-population due to prolonged drought conditions.



Creating a regional innovation ecosystem: the Goondiwindi case study

The Goondiwindi region aims to be Australia's centre of agricultural excellence, a premier visitor destination, and a region celebrated for its prosperous rural lifestyle. The Centre for Agricultural Excellence concept will see the creation of an ecosystem that will support local producers in developing a solution to their everyday farming issues using local businesses, funded by local investors and employing and educating locals, as well as attracting investment and additional personnel to the region. The Centre will be community led to resolve local issues and to serve local interests and industries. The facility is expected to be financially self-sustainable within a reasonable period. The Centre will act as an incubator for local businesses offering opportunities for collaboration, mentoring, investment, education and technical support. This project developed on to follow on research work with the Burnett region, Drought Resilient Leaders and Regional Australia Institute by Renando and Spicer among others.

Improving adoption of temperature monitoring technologies in the vegetable value chains: case study of South East Queensland (2019–2022 PhD student)

Agriculture is the mainstay of the Australian economic and social development. This sector accounts for 58% of the Australian land use (385 million hectares), 59% of water extractions, 14% of overall exports and contributes 2.7% to the GDP (ABARES 2018) and also provides 2.5% of the employment. This sector has played a significant role in providing food and fibre products to the nation and around the world. Innovation has been a significant contributor to the success of Australian agriculture. The vegetable growing sector in Australia is a major source of food. Vegetable production accounts for 9% of the total value of agricultural production which is \$58 billion in Australia (ABS 2018b). It supplies fresh vegetables and processed vegetable products mostly consumed in Australia but also for export. The gross value of vegetable production increased by 9% in 2016–17 to AU \$3.9 billion

continued

which made the vegetable sector the fourth-highest sector of agricultural value in Australia after livestock, wheat and fruit and nuts (ABARES 2018). The vegetable sector contributed around 1% (AU \$354 million) of agricultural export income in the year 2016–17 (ABS 2018a). During the last decade, the total number of vegetable-growing farms fell by 31%, however, this number increased in New South Wales, Queensland and Tasmania over the same period. In Queensland, during 2016–17, 618 vegetable-growing farms accounted for 24% of the country's vegetable farms. Most of the vegetable farms in Queensland are located on the Darling Downs, Bundaberg and in Burdekin delta regions.

Waste stream development in vegetable supply chains (2021–2023 PhD Student)

The food waste policy landscape in Australia is complex. There is no clear national vision, nor targeted policy support to advance the bioprocessing industry. The sector is largely governed at state and local government levels with each state having separate and differing legislation and regulatory frameworks addressing food waste management, including strategies for developing the bioprocessing sector. This makes for

a complex system of pathways to achieving national food waste commitments. The barriers to diverting food waste to high-value destinations in Australia are not comprehensively understood, and there is limited analysis available on the impact public policy implications have on those barriers or the potential policy drivers that would shift the current landscape in favour of industry development. This study asks, what governance frameworks would best support Australia to divert fruit and vegetable waste to 'high-value destinations', while optimising its economic, social and environmental food waste objectives? This study will be conducted within a constructivism paradigm. Kuhn (1962) defines a research paradigm as a set of common beliefs and agreements shared by researchers regarding how problems should be understood and addressed. Constructivism is an interpretivist paradigm holding that truth is a particular belief system held in a particular context (Healy & Perry, 2000). From a constructivist perspective, people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences (Honebein, 1996). Researching this constructed reality depends on interactions between interviewer and respondent (Guba and Lincoln, 1994).



4.2.3 Value chains

The theme of value chains was led by CQU, focusing on how to maximise value chain benefits for stakeholders in rural economies.

Value chain analysis: three case studies

The development of agriculture and value chains is a major component to rural economies. Major opportunities lie in the development of integrated value chains where agricultural products better meet market specification, logistics enable access to diverse markets, and quality can be assured with detailed market feedback and intelligence. This allows greater value to be derived from agricultural products, new markets to be developed and higher proportion of product value being earned by the producer.

This is particularly important as consumer demand and expectations change, global market access expands and production becomes more vertically integrated.

Priorities for RECoE in value chain research are:

- Supporting innovation in agricultural production systems and value chains and establishing links with transformed manufacturers,
- Developing market innovation and identifying new markets and matching new products to high value markets,
- Promoting food and fibre product development,
- Understanding investment attraction to scale-up opportunities and progress innovative business models. Supporting the commercialisation of new ideas, products and technologies,
- Researching and identifying "new economy" economic opportunities including enabling agricultural climate adaptation and transition, and
- Diffusing inventions and innovations developed by producers and by researchers.

Aquaculture supply and value chains

The demand for seafood in Australia exceeds domestic supply and is increasing due to population growth, rising household incomes and healthier food choices by consumers. The aquaculture industry has the potential to significantly expand to supply the domestic and export markets with farmed seafood. The Queensland Government supports the future development and growth of the aquaculture industry. Yet, growth has been slow, potentially because complexities and barriers in the supply and value chains of seafood that is cultivated in Queensland. The oyster industry in Queensland is characterised by a relatively small production volume compared to oyster production in other Australian states. The Sydney rock oyster (Saccostrea glomerata) is the key species produced, mainly in Moreton Bay, very small volumes of black-lip oysters (Saccostrea echinare) and milky oysters (Saccostrea scyhophilla) are cultivated in tropical regions of Queensland. The aim of this study is to investigate whether the supply and value chain for oysters produced in Queensland differs from the supply network of oysters in other states in Australia, and if so to identify possible reasons for that.

Consumer demand for beef – assessing credence factors for environment, health and animal welfare

Beef production is the major agricultural industry in Queensland, particularly in the central Queensland region where it generates \$1,041 Million p.a. In recent decades there has been major advances in the way that beef is objectively measured, so that quality can be communicated through mechanisms such as Meat Standards Australia. This helps to signal to producers the eating standards that customers desire. At the same time there is an increasing number of vegetarian consumers who by giving up beef are seeking to improve environmental, health or animal welfare outcomes. There is however no signal to these consumers regarding the characteristics of beef. There is rapid growth in customer demands for information about other aspects of meat production, such as animal welfare, environmental impacts, husbandry standards and health impacts that cannot be assessed through objective

continued

measures. Concerns about these types of factors, termed credence factors, are beginning to have major impacts on meat purchasing and eating behaviour. This study aims to examine the growth of credence claim demands for beef and identify the relationship between meat consumption and different credence information strategies (such as branding for organics or animal welfare standards). The project also aims to identify the best way to communicate credence attributes of beef to consumers the benefit to the beef industry in doing this.

Evaluation of hybrid-cooperative model for horticulture: a case study of Tropical Pines

Currently, there are approximately 80 commercial pineapple enterprises in Australia and all of them located in the State of Queensland except one in Northern Territory (PHA, 2018). Tropical Pines and Pinata are two major fresh pineapple suppliers in Australia. Tropical Pines' headquarter is in Yeppoon, central Queensland and they have about 20 growers and four large packing sheds (Hort Innovation 2017). They supplied about 45% of the total fresh pineapple in Australian domestic markets. They followed a hybrid cooperative model to run their business, which means farmers follow the cooperative model to sending their produces to Tropical Pines (TP) and TP manages post-harvest supply chain up to the consumer level. The company provides packing, sales and marketing, agronomy, logistics and administrative services (TP, 2016). This research will contribute to the empirical literature by assessing a large amount of evidence about the potential barriers, facilitators and expectations that influence the farmers' behaviour of accepting a hybrid cooperative model. The study output will inform the pineapple industry, horticulture sector and the Queensland Government about how a small industry sector can cooperate to find appropriate price and market for their produce. This study aims to examine the governance, economic and business efficiency and sustainability of hybrid cooperative model for pineapple supply chain development in Queensland through a case study of Tropical Pines.

Supply chains of the sheep and goat meat industry

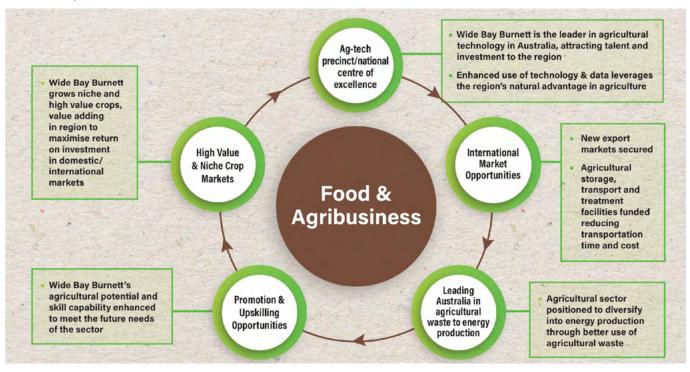
The purpose of this report is to identify and map the supply chain models that exist in the Qld Sheep and goat meat industry. This will provide a base to develop information and feedback to government and industry to address identified problems and prospects. The underlying aim of this research and subsequent policy advice is to help producers within the industry increase their financial returns and contribute to economic growth in sheep and goat producing communities. To map and classify the supply chain, interviews were conducted with a number of intermediaries. This allowed the structure of sheep and goat meat supply chains to be assessed in the context of networks, key attributes and critical linkage points. The questions were centred around mapping the supply chain structure and processes. The supply chain questions were conducted using different thematic foci on where value is added, key aspects of the links that make them flexible or rigid, and limitations or opportunities in the supply chain.

Local consumer demands and domestic supply of sheep and goat meat

Understanding consumer demand critical for the development of the sheep meat and goat meat industries. Past studies have, at a national level, found that diverse backgrounds increased demand for leaner cuts, and price being important to consumers. The links between retail outlets and consumers are critical, with the findings also highlighting that the shopper is also the cook (Star, 2021). However most previous studies of consumer demand have asked consumers directly about their preferences or analysed broad market data. Information about demands has rarely been sourced from the supply chain, such as from butchers and direct retailers. This study interviewed 25 meat retailers from Western Qld and the Darling Downs along with Brisbane, Central and North Queensland to identify trends in demands for sheep and goat meat.

The study was conducted through a combination of face-to-face and over the phone interviews. This allowed a series of open-ended questions to be asked relating to attitudes, consumer demands and market segments. The interviews sought to gain perspectives from the butchers and retailers regarding their experiences with customers. A thematic review approach was taken to analyse the findings with key themes identified as opportunities for diverse markets, attention to market segments particularly in tourist areas, and price impacting on the supply chains.

RECoE worked with specific regions on developing plans and concepts for industry such as an Agribusiness strategic document for the Wide Bay Burnett – a region with immense opportunity challenged by coastal and inland variation, water access and workforce



4.2.4 Policy and governance

The policy and governance theme led by JCU, focusing on the complexities of policy development and implementation and the role of policy in rural economies and their success.

Policy development for regional Queensland

Rural economic development is a complex process and the breadth of issues confronting policy makers, both contextual and conceptual, need consideration. This paper provides an initial exploratory analysis and overview of key issues in economic policy making of relevance to rural and regional areas, highlighting the key issues that have emerged from scholars and practitioners. The purpose of the paper is to present the landscape of factors and issues relevant to policy making and to enable effective conceptualisation of rural/regional economic policy development within a larger contextual framework. This exploratory paper will unpack key issues influencing rural/regional governance, policy formulation, adoption and implementation.

QLD rural and regional workforce policy analysis

Queensland's rural economies have undergone significant structural change and adjustment in the last three decades. A number of factors have driven these major structural shifts, including increasing and rapid exposure to global markets, poor terms of trade and fluctuations in financial markets, technological change, environmental concerns and changing consumer demands. Economies going through transition often also experience the reallocation of the key components of production such as land, labour and capital. These changes, in turn, alter where and how businesses are conducted. Queensland rural economies also have distinct characteristics and diverse strengths and needs. The economies of rural Queensland have a large proportion of small businesses, a lower ratio of educational qualifications, a lower ratio of professional occupations, ageing populations, a lower ratio of digital literacy and slower technology up-take. Increasingly, there is emphasis in the regions in shifting to enhanced competitiveness and productivity.

Connectivity and inclusion in regional and rural communities

In 2018, with funding from the Australian Communications Consumer Action Network (ACCAN), James Cook University partnered with Northern Gulf Resource Management Group to complete three-weeklong data field trips to towns and properties across the Gulf Savannah. The lead researcher, Dr Amber Marshall, attended and presented at rural events, undertook interviews and focus groups, and conducted three case studies of cattle properties. These activities provided real-world context for the policy analysis undertaken in this report. This cross-level, cross-sector policy analysis was undertaken to determine the laws and strategies that impact rural and remote internet access, reliability and affordability, along with digital ability and capacity building frameworks.

The findings (11 in total) address issues ranging from barriers to connection (such as lack of continuity in the telecommunications network); social factors impacting digital resource allocation and consumption (such as intergenerational and gender-related circumstances); threats to agricultural industry (such as the need to preserve product integrity and to attract/train workers); and consumer-level insights (such as population heterogeneity and expectations of fairness). These comprehensive findings give rise to several recommendations for federal, state and local governments in partnership with community and industry organisations.

Population policy for regional and rural Queensland

Population concerns have been on the national agenda since the settlement of Australia. Australia's national development has had a distinctive pattern of settlement across the continent landscape, presenting a range of social, economic, infrastructure, and environmental challenges for the nation. Population growth has differential impacts for metropolitan and regional/rural, and for inland and coastal areas. Population change been a core issue for the major cities in Australia: access to affordable housing, suitable employment,

infrastructure, and services; managing growth and congestion within environmental constraints; and the political management of popular anxieties around urban diversity and consolidation (McQuirk & Argent 2011). For regional/rural areas, population issues have included outmigration of youth, declining population of inlands and fast coastal growth, demographic change including ageing profiles, environmental and economic challenges, workforce and skills shortages, service and business viability linked with population size and growth management. Population change and dynamics is seen as presenting both challenges and opportunities for the nation, differing across regions and locations.

Leveraging digital development in regional and rural Queensland: policy discussion paper

Digital connectivity and capability are essential for regional economic development in the 21st century. Key sectors such as agriculture, resources, energy, tourism, and health are undergoing dramatic transformation globally, and there are enormous opportunities for Queensland and Australia to leverage telecommunications and the internet to increase productivity, diversify industries, and access global markets. Never has digital connectivity been so important in improving liveability and maintaining people and workforces in regional and rural communities.



Digital connectivity was a key policy research theme in 2019-20 with both a Northern Australia and Western Queensland focus for James Cook University and University of Southern Queensland researchers – pictured here Professors Allan Dale and Hurriyet Babacan with colleagues after leading a digital connectivity forum in Cairns in August 2019. (Source: Hurriyet Babacan)

continued

4.2.5 Engagement and translation

RECoE offered a series of economic development training courses in 2019–2021. The intention was to build on the foundations laid by the initial training courses that were offered through the Rural Economies Centre of Excellence in 2019. The Translation and Engagement program was aimed at people working with economic development issues in regional Queensland, with more specific aims including:

- Offer more targeted training that follows on from the introductory programs in 2019
- Make the courses accessible to a broad range of people across regional Queensland
- Build awareness and familiarity of different economic tools
- Providing skills development for professionals especially those working in and with rural and regional communities.

Economic Development Workshops 2019

Five one day workshops were held in Rockhampton, Toowoomba, (x2), Cairns and Mt Isa with 102 participants in total. Feedback is expanded below in Evaluation section (6.2).

Annual Rural Economic Development Forum 2019

Held in October at USQ the first annual forum was attended by around 100 participants.

The final program can be found here: https://www.ruraleconomies.org.au/top/annual-forum-2021/.





Economic development workshop virtual mode of offering in 2020

The courses were offered in virtual mode by Zoom. Each session involved a one hour lecture, followed by another hour of discussion, examples and exercises. The delivery content is provided in the below table:

Date	Time	Topic Title	Presenter(s)	Output
Thursday 9/4/20	12–2pm	Leading economic recovery in regional communities – strategies and approaches for rural economic development practitioners	A/Prof Ben Lyons Dr Geoff Woolcock Dr Chad Renando Ms Jo Sheppard (USQ)	Webinar recording
Thursday 23/4/20	12-2pm	Community Economic Assessment – multipliers and input-output analysis	Prof John Rolfe (CQU)	Webinar recording
Thursday 30/4/20	12-2pm	Governing Well for Regional and Rural Economic Development	Prof Allan Dale (JCU)	
Thursday 7/5/20	12-2pm	Community Economic Assessment – Measures to assess economic activity in community and regions	Prof John Rolfe (CQU)	Webinar recording
Thursday 14/5/20	12–2pm	Economic Development Strategy for Vibrant Regions	Prof Hurriyet Babacan (JCU)	Webinar recording
Thursday 21/5/20	12–2pm	Resource Economics – Introduction to Cost-Benefit analysis	Dr Peggy Schrobback (CQU)	Webinar recording
Thursday 4/6/20	12-2pm	Resource Economics – Measures to evaluate between different policy options, including evaluations around water, infrastructure, conservation and development options	Dr Jeremy De Valck Dr Peggy Schrobback + Prof John Rolfe (CQU)	Webinar recording
Thursday 11/6/20	12-2pm	Striving for Digital Connectivity: Digital Equality Making a World of Difference to Regional Queensland	Saleena Ham (USQ) Prof Hurriyet Babacan (JCU – RECoE) Prof Jim Cavaye (UTas) Trudi Bartlett (RDA)	Webinar Recording and presentation
Thursday 18/6/20	12-2pm	Production Economics – Modelling production at the enterprise level	Prof John Rolfe (CQU)	Webinar recording and presentation
Thursday 2/7/20	12–2pm	Production Economics – Evaluating industry or sector economic performance	Prof John Rolfe (CQU)	Click here to register
Thursday 16/7/20	12-2pm	Supply Chains – Analysis from input suppliers through to end markets	Dr Peggy Schrobback A/Prof Delwar Akbar (CQU)	Click here to register
Thursday 23/7/20	12-2pm	A 360 View of the implications of Crises and Disasters for Regional Tourism Economies	Prof Gabby Walters Prof Judith Mair Ms Yawei Jiang (UQ)	Click here to register

2021 RECoE webinar series

Oct 2021 – Making Sense of Markets for Ecosystem Services: focus on what will help with identification and management of opportunities and trends in emergent environmental markets.

Speakers

Ian Mackenzie, UQ – The Drivers of Emerging Environmental Markets

- Types and context of environmental markets
- Nature of environmental markets in Australia
- The reality now e.g. China initiatives
- Lessons learned what works and what does not
- Some examples from Granite Belt

Amelia Selles, DES – Environmental Impact and The role of Environmental Markets

- Voluntary vs compliance environmental markets, where do environmental offsets fit in
- Role of government
- Challenges and opportunities, what are we hearing?
- How do we better support environmental markets in Queensland?

Carole Sweatman, GreenCollar Group – Scale and Opportunity in the Real World: What are the opportunities?

- Imagine this was a new major commodity
- How do we get ahead of the curve?
- How do we position ourselves now?
- Implications of market based approaches to our organisation/community

Nigel Onley, Taroom Producer – Decision making factors and influences

- What considerations, what does a producer need to know for decisions?
- Impediments experienced practices, natural resource, political, cultural?
- Opportunities realised: results

Listen to the audio from this event on our website

Nov 2021 - Changing rural economies (See links below for the recordings and presentations)

Webinar #2: In this session we will explore new thinking achieving vibrance and viability post COVID, Qld recovery and adaptation with future economic models, structural adjustments that are needed for sustainable and inclusive rural economic development.

Date: 10:30am-12pm (Queensland time)

Speakers

Cassian Drew, Inclusive Growth
Presentation / Video link

Professor Allan Dale, James Cook University Presentation / Video link

John Carey, Red Earth Community Foundation (South Burnett)

Presentation / Video link

Dec 2021 – The future of regional and rural workforce

Webinar focus was on trends and disruptions to workforce and the impacts this has on rural industries. Webinar explored challenges and new workforce narratives and models for transitioning economies, policy and program coordination.

Guest Speakers for this session were:

- Prof Hurriyet Babacan Rural Economies Centre of Excellence/JCU
- Bree Grima Bundaberg Fruit and Vegetable Growers
- Tamlyn Brennan Consultant and member of Jobs Queensland Board

Other engagement activities outside of workshops

- Department of Premier and Cabinet regional forums 2020–2022
- Prof Allan Dale and A/Prof Ben Lyons participated in their respective regional forums for 2020–21.

4.3 Covid and RECoE

From March 2020, the COVID-19 pandemic caused some level of disruption to all RECoE projects and activities. This saw RECoE's original contract extended into 2021. Ultimately, only a couple of projects were significantly impacted. This included those in the Granite Belt requiring extensive field work and interviews, but this also saw RECoE partners adapt and deliver under the 'translation and engagement' theme. While face to face was no longer an option, RECoE moved online and held a series of 10 webinars from April through to July 2020, with more than 500 people registering and attending. This is a good example of RECoE utilising the diversity within its partnership in terms of specialisation, and topics covered ranged from disaster relief through to economic modelling and its different forms.

This was carried over again into 2021 when the COVID pandemic resulted in RECoE cancelling the planned annual forum due to be held in Bundaberg. RECoE also made the decision to run a smaller number of webinars and focus on increasing participation.

Professor John Rolfe (CQ University) wrote an early pandemic impact paper, another example of RECoE's ability to respond and produce quickly³. The pandemic response was rolled out from a state government perspective, similar to disaster recovery efforts that were already in place.

At the end of 2020 RECoE were able to hold a round table with the state government with up to eight state government agencies in attendance. This meeting discussed RECoE 1.0's achievements and activities to date. This was the first official attempt to move towards RECoE 2.0.

continued

4.4 RECoE's strengths

4.4.1 Place-based approaches, working with communities

One of RECoE's biggest strengths comes from the place-based nature of the regional universities and their ability to engage with and be embedded in their communities. As Professor Allan Dale says, [RECoE researchers] "stand beside and behind supporting their respective communities [with which are they geographically placed]".

This also gives RECoE the ability to have diversity in its expertise and specialisation. This capability when it comes to different methodology, different fields, and approaches, is very useful in tackling the numerous issues within our rural and regional communities. The good will between partners resulted in a high level of functionality and there were never any issues between partners when it came to negotiations and agreements/ developing projects, and scoping new platforms, such as the Regional Drought Resilience plans. The costs of governance and monitoring for these and subsequent projects (e.g. RDRP, Drought Resilient Leaders, Decarbonisation in regions etc) were low.

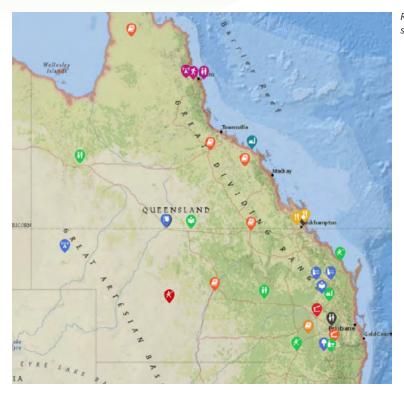
The experience of the leadership team was another key strength of RECoE. The experience when it comes to working with government meant that RECoE were always in tune with government agency expectations and the quality of work required as well as engagement and communication with regional stakeholders. While there are always improvements to be made (discussed further in the next section), RECoE has been able to deliver positive outcomes for our regional communities. RECoE has developed into a strong applied research centre and has a strong bond with and connection to communities, who respect and value RECoE's work. Regional development can be a lonely business, and the ability to create a community through the initial regional economic development workshop program in 2019, and to further build on this through 2021 and 2022, is a major contributor to our success as a research centre, especially within the target demographic of regional economic and community development agents and stakeholders.

This is evident in Regional Drought Resilience Planning (RDRP) projects, where RECoE have been working with DAF and the Federal Government Future Drought Fund since 2021. There are many examples where RECoE has been a proactive member of regional initiatives,

such as the Burnett Inland, working with the Burnett Inland Economic Development Organisation (BIEDO), the Red Earth Foundation, and the Wide Bay Agribusiness strategy. The Quilpie Wellsprings project is a great example of RECoE's flexibility and use of an innovative approach to economic development strategies based on a micro region.



Goondiwindi-based RECoE contractor Julia Spicer at the commencement of the engagement for the Regional Drought Plan project and 2023 Queensland Chief Entrepreneur: the first regional person to be in that role.



RECoE project locations 2018–2022 source: www.ruraleconomies.org.au

The ability to utilise different cohorts and different economic approaches out of the UQ St Lucia Faculty of Business, Economics and Law adds credibility to the partnership and provides an asset in access to up to 150 economic academics. This is certainly a key strength and an area for further development in future iterations and projects - and is a focus of the RECoE 2.0 bid document.

Another key outcome has been the ability to influence agencies such as Queensland Treasury and Queensland Treasury Corporation regarding projects such as their building smarter cities and regional investment portfolio, and the ability to provide feedback. QTC, DES et al are important agencies for future RECoE research and RECoE can leverage networks of the leadership group and their involvement in topical projects such as the Bradfield Scheme Review under Professors Ross Garnaut and Allan Dale.

Another important strength has been the recruitment of early and mid-career researchers. This includes Marlyn McInnerney, Saleena Ham and Chad Renando at USQ,

Megan Star and Peggy Schrohback at CQ, Jennifer McCugh at JCU and Cristyn Meath and Belinda Wade at UQ. Building on their work and fostering relationships is an important step with respect to succession and ensuring RECoE's sustainability as a research centre. There has always been a spirit of this at RECoE, possibly from Professor Jim Cavaye, who has always emphasised the importance of working with and focusing on strong bonds within our communities, as well as regional economic development organisations when developing research projects. These include organisations such as Regional Development Australia and Southern Queensland Landscapes, Agforce/QFF, Bundaberg Fruit and Veg Growers, the far North Queensland Regional Organisation of Councils and Central Queensland Regional Organisation of Councils.

The importance of this embeddedness cannot be overstated in its ability to use a regional lens and ultimately make strong recommendations and critiques via policy formulation.

4.5 RECoE's weaknesses

A challenge with the original contract was the transactional nature of delivering reports against milestones. RECoE 1.0 often had work being done by different researchers in semi-isolation from other researchers. Reports and papers were delivered to meet milestones, but there was often inadequate follow up and quality control before submissions were made to DAF. This meant that some of the great work being completed was lost and/or not adequately built on. The accumulation of this work was something that RECoE can do better via a more decentralised i.e. more than one dedicated resource located in one partner University.

In the early days, there was the intention to recruit at least two PhD students per university over the course of the contract, but this was not aligned or difficult to achieve with the timeline of the initial contract. Recruiting the right HDR students takes time. One success in this space is the ability to convert our existing PhDs into a good RECoE product. This is exemplified by our three completed students; Saleena Ham, Marlyn McInnerney and Chad Renando, and four new students, Hannah Churton, Wendy Strachan, Carl Manton and Moudassir Habib. However, all are at USQ and there is a need for recruitment and on boarding at all four partner universities. RECoE's PhD output will improve over time as the centre develops a track record and deeper relationships with state and local agencies.

There is the opportunity for RECoE to increase immediate media prominence and influence⁴. This could be a low-cost exercise (<50k per year), such as a podcast or video casting. This would be a great mechanism for the transfer of knowledge and engagement with regional and rural communities. USQ's media and communications team provided strong support across 2018–2022 and the opportunity for expanded digital assets in podcasts or video casting is in early development – a useful platform for RDRP and other research translation.

Further developing our cross-university partnerships in terms of collaborating on bigger projects will also be an area of focus moving forward. RECoE executed this successfully within the regional drought resilience plans under the Future Drought Fund, as well as our drought hubs, drought leaders and potential decarbonisation work.

Another area where RECoE could aim to improve in RECoE 2.0 is governance. RECoE 1.0 administration resources were quite restricted, with one administrative assistant shared with another institute at USQ before they came on board full time in 2022. This structure and operation will be discussed further with the industry advisory board. RECoE's incumbent industry advisory board is an asset, with impressive and diverse members bringing a wealth of experience and knowledge.

Members include the president of Queensland AgForce, a former regional Mayor and a former CEO of the Regional Australia Institute.

















Formalising or further integrating this board would increase the cost but could potentially add a great amount of value. The utilisation of The Yellow Company in the RDRP project highlighted a suitable model of governance and operation that satisfied both funding organisation compliance and project delivery. Taking that operational model into RECoE 2.0 would increase accountability and project outcomes allowing researchers to focus on their research, which becomes even more important as RECoE's funding and scope of work expands.

Financial acquittal of the RECoE milestones was a requirement under the DAF contract and the format and delivery of this took time (almost 2 years) to get right. Financial deployment and effectiveness could be measured more efficiently and effectively for better management visibility going forward. Contractual and legal arrangements improved and the single contract with USQ administering seems to have worked well especially for extensions and variations in 2021 in light of COVID impacts and the RDRP project. A summary of financial funding and utilisation is provided in Section 9 of this document.

⁴ Based on media monitoring Meltwater data, media coverage referencing Ben Lyons and the Rural Economies Centre of Excellence between Jan 1 2019 and July 20 2022 reached at least an estimated potential audience of 476,576,972 with an advertising value equivalent of \$4,408,338.

4.6 Where does RECoE fit in the regional and rural development landscape?

The RECoE research partnership by its nature is very well placed to be out in respective communities. This embedded position provides an insight directly around any policy or proclamations that come from State and Federal government, as well as international trends. RECoE researchers are able to look at the impact of these trends and/or policies on regional communities with appropriate context.

This can be seen right from the first delivered research project, which looked at water and the impact of water access and agricultural water use in the Boyne and Burnett river systems, both around Gayndah, Mundubberah and Colstoun Lakes in 2018–19 through to the RDRP project delivery in 2021–22.

The Boyne River water analysis project utilised USQ's engagement with UQ's economic analysis capability around what impact new and existing water infrastructure had on the economy. RECoE does not necessarily do the basic economic analysis that's done by many different agencies or platforms such as Economy id, ABS or Treasury. What RECoE should aim to be really good at is translating that information on economic impact back to those agencies. Not competing with the likes of the big four, but leading them in regional development best practices and methodologies. RECoE has done a lot of work in facilitation and working with communities, adding that economic muscle and input into the discussions with communities could be a key enhancement for RECoE 2.0.

RECoE has worked with community groups across North, South and Central Queensland. There have been many examples of engagement and collaboration with local government and local regional organisations both as a knowledge provider and facilitator. RECoE's work is generated from identified issues and then delivered back for community consumption, with the aim to influence and improve outcomes in region.

RECoE researchers have worked to create greater insight into the problems of digital connectivity, the many issues around the transition to renewable energy and the upcoming decarbonisation debate. One example is the work of Dr Chad Renando and the Burnett Inland Futures (2022) report. This looks at communities owning and planning for the transition from power station closure, which is slated for the mid–2030s. Similar work is being done in Goondiwindi AgTech and the regional innovation network.

More recently, RECoE was instrumental in the Regional Drought Resilience Planning and Drought Resilience Leaders projects, achieving desired outcomes and objectives, especially from the viewpoint of the regional communities. However, RECoE's discipline in sticking with a place-based approach and to not be extractive of regional resources and the actors within them has resulted in better plans, better taxpayer investment and better outcomes for all.

RECoE does not aim to engage in highly theoretical and academic exercises, although it could look to contribute applied learnings to this area of research, i.e. looking at methodologies for improved rural and regional research and develop an international reputation on this basis. Therefore, RECoE is working, translating, and generating research outcomes into knowledge and tools that can be used by regions and key federal and state agencies to better understand the challenges and potential opportunities faced by those regions and potential solutions for these issues.

RECoE will never be measured in the academic sense by its publication record alone, although RECoE has seen a number of publications, and publications are an important KPI for any academic-based research centre. Improving the quality, accumulation and coordination of these outputs would be another aspect to be improved upon in RECoE 2.0. Another key metric for measuring success is in the continuity and capacity building of our place-based research team. While this is addressed earlier in this report in summarising PhDs, expanded investment and strategy is required to look at ways of diversifying outputs into professional development as well as academic.

A key issue around rural and regional development is who owns and implements these plans and/or recommendations. Over a short time as a research partner, RECoE has looked to build on previous research. This is challenging, in part because regions often experience a lot of change, particularly at a local government level. Since amalgamation, local governments in Queensland have taken on more responsibility, outside of the traditional scope of local government. Alongside the traditional responsibilities such as waste management and road maintenance, local governments often work in areas such as community and economic development. While this leads to an increased workload and portfolio of responsibility, it is also an area that many people now in these positions do not have a great deal of experience in. Because of this RECoE is often looking at helping and explaining the methodologies and principles of economic development to those now tasked with it.

Early on in RECoE, the leadership group looked at the collected lectures in Community Economic Analysis by Guy West and Rod Jensen from the University of Queensland. This resource has developed and collated some economic development methodologies that regional development practitioners employ and has built on previous work of Schaefer and the US rural development community from the 70s, through to the 90s. There remains the need of an updated resource, as the rural development space is continually evolving and changing. What that resource looks like is another discussion point moving forward with RECoE 2.0.

One of the most prominent and visible changes in Australia is the use of technology, both in broader society and on farm. Australia has also experienced largescale rural decline in many areas. The nature of different industries has also changed dramatically, such as the demise of the wool industry and the shift away from



continued

smaller family farms to larger monocultures and largescale production. New industries have also emerged, such as coal seam gas. The transition into renewables, particularly in Southern Queensland, but across the state, leads to new challenges around workforce, value chains and many other economic development issues. One key example is economic diversification and its facilitation. These issues require creativity and different approaches.

The RDRP process highlights the issue of ownership between local, state and federal governments. Who owns these plans, who is acting on these plans and who is responsible for monitoring implementation? This is often beyond the capacity of local government, as plans are often based around a greater region, with multiple local governments involved. The South-West and Darling Downs plan for example has five to six regional councils. The organisation of these councils often falls into informal arrangements, with varying levels of capability and efficacy. Therefore, the ability of LGAs to take on these projects is often limited, particularly for large scale projects.

While Queensland is a very large state, state decision making is generally highly centralised into the southeast corner and Brisbane in particular. This is often problematic as policy is generated from one urban setting. The tyranny of distance makes is a long recognised and prevalent regional and rural development problem, one that persists in contemporary Queensland rural economies.

RECOE is looking to address this and find ways to bridge the gap, and to translate these issues back into the decision-making process, most often in the capital city within the political apparatus.

One example of this would be Quilpie Wellspring. This project was not in the original RECoE contract but was a project that came across the principal consultant and local government of Quilpie, a far West Queensland council with an innovative circular economy idea; to take solar distilled artesian water and develop it into a distilled water product that could be used in aquaponics. Produce would be leafy green vegetables, jade and silver

perch. There is also a nutrient loop with a craft brewery, with Queensland being the only province in the world with an economic development strategy based on a craft brewery.

We are seeing a global trend towards niche or non-modified models of production, which has been influenced by COVID and the desire for local supply chains to increase reliability of fresh produce. This also creates employment and diversified deployment away from agriculture, and into a micro-precinct in a declining town. This project utilised a local government site that was otherwise dormant.

This framework could be used to address the housing issues and shortage of housing in regional areas, which has become a crisis in the last few years. This has been influenced by COVID, but the regions have seen a steady decline in quality housing available before this. This has been further influenced by an increase in the cost of construction. The fly in fly out nature of work for many people, especially employed by the state and federal government, has also exacerbated this. RECoE's role is to help bridge this knowledge gap, and de-risk this approach by investigating the economics and highlighting the value of this approach and the truly innovative rural community development project this leads to.

There have been additional examples of similar projects in other communities, such as Goondiwindi, not specifically around the circular economy model. These projects provide a platform to bring community together and facilitate collaboration. This is an important feature in regional areas that have become disjointed, and are in some cases, experiencing population decline and low levels of place-based community spirit. While RECOE does not have to be the instigator and directly involved in these projects, our methodologies and framework around the viability will be a valuable resource.

Projects beyond the original 4.7 **DAF** contract

Over the course of RECoE 1.0, there have been many projects undertaken that are beyond the scope of the DAF contract. These projects have added value to RECoE as a research centre and been well received in communities. The rationale for engagement with any of these projects was centred on RECoE's main vision around building capability and insight into rural and regional communities in Queensland and developing relations with strategic partners and regions. From a USQ perspective these projects ranged from Goondiwindi innovation ecosystem building, AGL's wind farm community engagement, the Burnett Inland Futures report, Musical trails assessment in the pandemic through to Sheep Meat Value chain analysis. Total funding achieved from USQ project value was \$1.046m AUD however this total across other RECoE partner Universities would be higher.

Sheep meat value and supply 4.7.1 chains

The report Supply Chains of the Sheep and Goat Meat Industry has been funded by the Department of Agriculture and Fisheries and prepared for RECoE by Dr Megan Star, Professor John Rolfe, Fleur Morrish and Associate Professor Ben Lyons.

The purpose of this report is to identify and map the supply chain models that exist in the Qld Sheep and goat meat industry. This will provide a base to develop information and feedback to government and industry to address identified problems and prospects. The underlying aim of this research and subsequent policy advice is to help producers within the industry increase their financial returns and contribute to economic growth in sheep and goat producing communities.

To map and classify the supply chain, interviews were conducted with a number of intermediaries. This allowed the structure of sheep and goat meat supply chains to be assessed in the context of networks, key attributes, and critical linkage points. The questions were centred around mapping the supply chain structure and processes. The supply chain questions were conducted using different thematic foci on where value is added, key aspects of the links that make them flexible or rigid, and limitations or opportunities in the supply chain.

This component involves collection and analysis of expert information to understand the critical components of sheep meat and goat meat supply chains. Direct interviews were selected as the method of data collection as suitable secondary data could not be identified. Interviews with 25 stakeholders from Western Qld and the Darling Downs and the domestic supply chain were completed either in-person or over the phone. The interviewees ranged from processors, wholesalers, agents, livestock carriers and were selected to represent a variety of pathways and functions in the supply chains. In the interviews each of the participants were asked a combination of open ended and closed ended questions.





Renewable energy projects and their impact on regional development both positive and negative was a research project led by Dr Cristyn Meath and Dr Belinda Wade at The University of Queensland in southern Queensland. Coopers Gap Windfarm and its surrounding community were one key site within this project (source AGL)

4.7.2 Renewable energy and regional communities: AGL and Coopers Gap Windfarm

RECoE prepared a social impact report for 2020/2021 for the Coopers Gap Wind Farm. As outlined by the Coordinator-General's Evaluation report for this project, the purpose of the report is to 'ensure the delivery of social and economic benefits and demonstrate how the proponent had addressed any community and stakeholder issues'.

The Coopers Gap wind farm is located between Dalby and Kingaroy, 250 km North-West of Brisbane. Coopers Gap is Australia's largest windfarm, with 123 wind turbines and a capacity of up to 453 megawatts, or the ability to power approximately 264,00 Australian homes. RECoE's role was to look at community engagement issues with stakeholders as the construction neared completion and the next phase of operation for the wind farm and residents.



Artist's Impression: Quilpie Wellspring, July 2019

Quilpie Wellspring: An innovative 4.7.3 approach to placemaking in isolated regions

Quilpie Shire is located in South-West Queensland, approximately 1,000 km west of Brisbane and has a population of 790, of which 654 reside in the town of Quilpie. Inspired by Quilpie's existing tourism and lifestyle image as an oasis in the arid outback landscape, the theme of water and its smart use in the Outback was adopted as the focus for new ideas to attract local business and employment.

Using a best practice approach to sustainable development and circular economy principles, Quilpie Wellspring provides a vision for new micro enterprises clustered on a 3.9 ha site in the heart of Quilpie. The mixed-use precinct is planned as a five-stage project with stage one being three new enterprises providing solar distilled water from the Great Artesian Basin, local craft beer and fresh aquaponics produce of local fish and vegetables with supporting arid food forest, ecological lagoon and public open space.

continued

4.7.4 Drought Resilience Leaders (ARLF/FDF)

RECOE has partnered with the Australian Rural Leadership Foundation to support the Future Drought Resilience Leaders Program. The Future Drought Resilience Leaders Program is a suite of personal and professional development opportunities designed to equip people working in or with rural, regional and remote communities with skills to lead their communities into the future.

Funded by the Australian Government's Future Drought Fund and facilitated by the Australian Rural Leadership Foundation, each program takes an innovative approach to building transformational leadership skills through collaborative learning and mentoring.

- Learn how to navigate change and support your community impacted by complex challenges.
- Gain leadership skills to lead your community into the future.
- Become a part of a national network of like-minded people, including the expansive ARLF Alumni network.
- Build future drought resilience in individuals, communities, organisations and industries.

This project delivered 12 cohorts in their respective regions from 2021—2022 and provided RECoE an opportunity to develop Monitoring and evaluation as a core competency of the partnership.



In early 2021, emerging from COVID and kicking off the Future Drought Fund Leaders project for 12 regions and over 300 participants across Australia – A/Prof Ben Lyons, Dr Chad Renando, Dr Geoff Woolcock, Dr Phil Currey, with Australian Rural Leadership Foundation team for the Future Drought Fund Resilient Leaders project start – with FRRR's Nina O'Brien in the background online from rural Victoria.



Future Drought Fund: Drought 4.7.5 innovation and adoption hubs

The University of Southern Queensland leads one of eight drought innovation hubs established to support farmers and communities in their preparation for drought. They connect farmers with regional agricultural experts, innovation, and new practices. A Knowledge Broker is available at each hub. Their role is to translate science into practice for their region. They use their network to encourage collaboration and learning across the hubs. They also help build connections with other Future Drought Fund programs.

The hub empowers stakeholders to co-design drought preparedness activities and apply innovation to ensure a thriving future for the region. Hub members, partners and stakeholders apply proven drought-resilience research on the ground to make this happen.

Hub activities have been designed in collaboration with farmers to meet local needs. Examples include:

- · on-farm trials of transformational technologies and practices
- training farmers in the use of decision-support tools
- upskilling farmers in innovation, entrepreneurship, and commercialisation.

The Australian Government is contributing \$10 million over 4 years through the Future Drought Fund to boost drought resilience and agricultural innovation. Hub partners will provide co-contributions of \$10.8 million over 4 years.

4.7.6 Decarbonising Queensland: An inclusive and resilient low carbon economy

This policy brief provides an assessment of key policy and technical issues, opportunities and options and provides recommendations to support Queensland Government in the design and delivery of the Queensland Climate Action Plan (QCAP) towards net-zero emissions. The findings herein are based on presentations and discussions by leading experts from Queensland university at the Vice Chancellor's Queensland Decarbonisation Forum, 29 June 2022.



4.7.7 Community development projects – head yakka/musical trails/migration/workforce

The Regional Community Development Program, within the Institute for Resilient Regions' Rural Economies Centre of Excellence (RECoE), develops and conducts community-partnered research to:

- Improve understanding and knowledge of regional community development;
- Improve the economic base, social vitality, and overall resilience of regional communities.

RECoE do this by:

- Working closely with community members to incorporate research in an appropriate, respectful and useful way. RECoE conducts research in partnership with regional and rural people, uses appropriate research methods and follow up after activities in communities.
- Working as part of the Rural Economies Centre
 of Excellence (RECoE) including developing and
 conducting projects within RECoE, having input to the
 centre and managing USQ's partnership in the Centre.
- Investing in relationships with community members and a range of regional community, government, corporate and philanthropic stakeholders.
- Developing and conducting projects that address key issues and opportunities in communities. Funding proposals are targeted and prepared to be very competitive.

Dr Geoff Woolcock on the Queensland Music trails research project

RECoE Monitoring, Evaluation and Learning (MEL)

Future Drought Fund (FDF)

A range of actions are being progressed in this program including qualitative and quantitative research for the three FDF-funded initiatives:

- Drought Resilience Leaders Development Program
- · Community Extension Grants
- Drought Resilience Leaders Mentoring Program

Building Resilient Regional Leaders Initiative (BRRLI)

- Assessing progress in 10 place-based initiatives in conjunction with ARLF and FRRR
- Co-designing project-by-project sustainable MEL strategies

Leading Australian Resilient Communities (LARC)

- Developing and implementing MEL frameworks in ten regions across Australia, working closely with partner ARLF, state Leadership peak bodies and RAI
- Complemented by a similar MEL process with four Regeneration (REGEN) regions responding to recent natural disasters

Recently completed projects

Qld Music Festival (QMF) inaugural Regional Music Trail Evaluation

Qualitative evaluation of the community and social wellbeing impacts of the inaugural Regional Music Trail from Dalby to Birdsville.

DEHP – Clean Growth Choices Adaptation and Transition re Climate Change

MEL oversight of the Communities in Transition project, funding extended into 2021.

Orienting Communities to Tourism

Economic development in six local government areas re tourism.

Central West Qld Digital Connectivity Project

Social and economic impacts of fast broadband and mobile phone connection in remote communities.



4.7.8 Fight Food Waste CRC Project Proposal: Horticulture waste streams (2022) – Delwar Akbar (CQU, USQ, UQ)

This project aims to develop an action plan for the horticulture sector of Australia, which will be known as the "Horticulture Section Action Plan (HSAP)". The plan will create an overall national framework to assist actors across the horticulture supply chain to reduce their waste of fresh produce. This project will also develop whole chain food waste reduction plans for commodities 1 and 2.

This study will use sector wide and internationally recognised co-design approaches to identify horticultural waste in the end-to-end value chain as well as to find practical, technically and commercially viable 'solutions' to utilising horticultural waste. Firstly, this study will use a review-plan-do framework (FIAL, 2019) to develop a sector wide action plan for horticulture waste prevention, management and recovery. Secondly, this study will use WRAP's (a UK based Waste and Resources Action Programme) whole chain food waste reduction plan toolkit (WRAP, 2020) to complete a waste mapping exercise across the supply chain from production to retailing for banana and melon industries. Working with actors across the horticulture supply chain from input providers to retailers, this approach highlights opportunities to reduce waste, and greenhouse gas emissions, while improving industry profitability. This study will identify the waste hotspots first followed by a deep dive into root cause analysis, focusing areas for improvement. The project will then identify and prioritise a range of practical solutions to reduce waste across the supply chain. In determining the practical solution(s), the study will use the food recovery hierarchy to determine the best and highest use of horticulture waste. Co-designed workshops will explore alternative processes, technologies and systems to address identified hotspots and causes. Additional insights will be gathered from international best practice, emerging technologies, and solutions from comparable industries.

4.7.9 Burnett Inland – Chad Renando (USQ)

The Burnett Inland region, comprising of the North Burnett Regional Council, South Burnett Regional Council, and Cherbourg Aboriginal Shire Council Local Government Authorities, provides a valuable contribution to Australian agriculture, the Queensland economy, the Wide Bay region, and their respective local communities. The region is unique in its geographic, demographic, and economic position relative to surrounding communities. This report examines the region in this context, with a focus on long-term strategies to enable future sustainability, resilience, and competitive growth.

To enable the Burnett Inland region to transition, there is a need to activate all the available assets. Like many regions across Australia, Burnett Inland is experiencing unprecedented level of sustained and diverse challenges. Rapid technological advances provide significant benefits but are not equally accessible for everyone based on proximity of networks, available information, and digital connectivity. The increase in frequency and severity of climate-related events such as drought, fires, and floods have a heightened impact on regional communities. As compared to acute impacts of fires and floods that often necessitate ... The continued decarbonisation of the economy requires action from two sectors prominent in regional communities - mining and agriculture - as regional communities are relied upon to achieve state, national, and global carbon targets. Pervasive demographic shifts and the hallowing out of younger populations affect adaptability to respond to change with available talent and local leadership capacity.

These common challenges are not experienced equally across all regions, with embedded disadvantages including a lack of availability of environmental assets, fewer liveability characteristics, and reduced access to critical digital, water, energy, and transport infrastructure. These differences create systemic inequalities highlighted in the Burnett Inland when

considering investment in surrounding regions. Without intentional action, this gap will continue to widen. These challenges are complex and resistant to change to the extent that they will not be addressed by any single organisation or institution.

To consider a response to this challenge in the Burnett Inland, this report considered input from multiple perspectives, including regional data, literature review, strategy and policy, observations from mapping of existing roles and interviews of stakeholders.

Roles considered include government, economic development organisations, service providers, peak bodies and industry groups, corporations, education providers, and community organisations and foundations. While each role provides valuable contributions, there is a lack of central, coordinating effort towards collective impact related to economic transition. Strategies in the region were analysed for their contribution to supporting economic diversification and transition. Over 920 strategies and initiatives were reviewed and categorised against 49 themes to consider the status, alignment, and accountability.

Four observations have been made when considering gaps and opportunities. First, there is varying capability and capacity for executing on stated strategies. Second, strategies require ownership by a stakeholder with sufficient scope and capacity to execute on the strategy. Third, the strategies need to be aligned with the accountability of the authoring role and there must be the structural support in the community to execute on the strategies. Fourth, few if any strategies consider shared regional outcomes across Burnett Inland.

Interviews from over 40 leaders in the region are examined to identify enabling and inhibiting contributions to community resilience. While there are enabling factors in some areas of relationship and trust, there are also a number of inhibiting factors across the social, individual, infrastructure, and institutional dimensions. The narratives highlight the culture in the community that reinforce status quo and resist change. These pervasive factors can only be addressed through collective action.

Future RECoE focus areas 4.8

The world continues to change with attention now focused on long term recovery responses to the global pandemic. Unite and Recover - the Queensland Government's Economic Recovery Plan – has the vision of protecting our health, creating jobs, and working together (partnerships). The plan aims to create strong economic growth that will result in long term resilient economies and communities, focusing on six pillars over the next two to five years: safeguarding our health; backing small business; making it for Queensland (growing manufacturing); building Queensland (driving investment in infrastructure); growing our regions; and investing in skills.

"Helping Queensland's regions grow from a strong and stable base in agriculture and resource sectors to attract talent and investment and drive sustainable economic prosperity.

We will provide more opportunities and connection by enhancing digital connectivity in our regions. We will continue to invest in clean energy and water which are critical resources for the competitiveness of our regions."

Growing our regions: Unite and Recover

As regional Queensland recovers from COVID-19 in a globally challenged economy, expert analysis and innovation through evidence-based policies and programs are vital for effective rural economic development, diversification and adaptation. RECoE is already aligning work to the Unite and Recover efforts by holding discussions and roundtable consultations with several Queensland Government economic and rural development agencies.

4.9 Future operational and governance considerations

University administration systems across the sector can be challenging at times, let alone across four entities and a government department. But overall legal, contractual, and financial administrative tasks worked well and became relatively streamlined as time progressed, whether it be the major legal review of the contract or procuring a meeting room in St George.

Efficiencies, particularly in regard to contract execution and deployment were another advantage for standing up the RDRP project in 2021 and 2022 via the variation of the original DAF 1.0.

There has been some discussion on the topic of organisational structure and this will be further developed in RECoE 2.0. A lot of activities and outcomes have occurred at USQ, particularly in terms of creating more ongoing capability. USQ benefited from having a dedicated RECoE resource within the university in comparison to the three other partner universities.

To increase the benefit and capability across the board, and ultimately for greater positive outcomes for regional communities, it would pay to have dedicated operational resources at each partner university. It would also be valuable to have a university leader from each partner on the governance board. Each of these directors could then work together and with the other universities in creating projects, supporting collaboration, and focusing on bigger and better projects. The cost-benefit of this structure will need to be further considered, but it is certainly worth additional discussion. There is no question that USQ benefited from this during RECoE's first iteration.

Similarly, at a governance level, management of the external advisory panel was relatively lightweight. This will be discussed later in this report, but this resource could be better utilised in future. As a general comment, administrative costs were kept minimal but perhaps at the expense of outward facing assets such as translating outputs and reports for a wider audience. For example, until mid-2022, the RECoE website was solely managed and updated by the Director.



Succession: Building future 4.10 capability within the RECoE research partners

One of the aspects that wasn't written in into the initial contract between DAF and RECoE was the building of capability within the four partner universities for researchers that could look at the economic and community development aspects of rural and regional communities.

As mentioned earlier, there was an initial plan for each university to have two PhDs over the course of the contract. This did not eventuate due to time constraints, resourcing, the transactional nature of meeting milestones and a timeline incompatible with a PhD project. Having said that, there were some existing PhD students and commencements, a majority at USQ.

This USQ centric bias on HDRs leads into one of the recommendations for RECoE 2.0, and the benefit that would come from having a dedicated resource at each university. Having this resource solely at USQ provides USQ with additional opportunities when it comes to higher degree by research students.

At USQ there were three PhDs already in progress when the contract commenced, and three of those subsequently went on to work in and completed RECoE PhD projects. Saleena Ham looked at real communities and real networks, Marlyn McInnerney looked at the aspects of regional women and Chad Renando looking at regional innovation ecosystems. At the time of writing this report, RECoE has an additional four PhDs underway; Moudassir Habib looking at ag tech technology uptake in regards to temperature monitoring of vegetable producers, Hannah Churton looking at waste to economic value within the vegetable production systems and also working with the Fight Food Waste CRC, Wendy Strachan based out of Wagga in New South Wales, looking at the change in demographics from small to larger corporate farming enterprises and that impact

on rural communities, and Carl Manton, the CEO of Goondiwindi Regional Council, looking at neoliberalism, full cost pricing and procurement in local government.

Overall, there's been some success in commencing and completing PhDs, but this has been dominated by USQ for the above resourcing reasons.

There is a gap within the marketplace around professional development for regional economic development that could be another opportunity to explore in future iterations. For example, many local government councillors undertake Australian Institute of Company Directors courses, which go for five days. These courses specialise in corporate governance. Whilst there is overlap, that's not a specialist skill set. RECoE initially looked at doing some rural research fellowship programs, but limited resourcing and the loss of Professor Jim Cavaye in late 2019 halted this. Responses to webinars and general research papers in the marketplace is strong, and there should be some dedicated resourcing and effort looking at this succession and development, of both professional workers outside the university system working in regional development, and within the university system.

4.10.1 PhDs commenced and completed



Chad Renando:
The role of
innovation hubs in
building community
resilience

Innovation ecosystems are presumed to be beneficial for local communities. Actors in roles of financial capital, government, incubators, education, research, and entrepreneurs collaborate to realise economic and social outcomes. These outcomes are expected to influence community resilience, defined in this research as economic, built environment/infrastructure, social and individual, and institutional resources that allow a community to thrive in conditions of uncertainty. Driven in part by these expectations, there has been significant growth in the Queensland innovation ecosystem. This growth includes the establishment and management of innovation hubs.

Yet there remains limited empirical evidence within literature demonstrating the link between innovation ecosystems and community resilience outcomes (Bristow & Healy, 2018; Simmie, 2014). There is also ambiguity in the constructs of the innovation ecosystem, innovation hubs, and community resilience. The emerging and socially constructed nature of the innovation ecosystem makes applying existing models to address this ambiguity through research difficult, as the models may not reflect the reality of those in a local community.

This research took a systems theory approach using actor network theory and critical realism to understand the role of the innovation hub in the innovation ecosystem, the contribution of the innovation ecosystem on community resilience, and the contribution of the innovation hub on community resilience. This was achieved through a literature review, assessment of the Australian context, and 147 interviews with roles across 16 regions in Queensland, Australia. Interviews were performed using an appreciative inquiry approach. Data was coded based on actors and roles, the sentiment as a benefit or barrier for the contributing and receiving role, and the expected impacted community resilience indicator. Results were analysed using social network analysis.

This research suggests that the innovation ecosystem and the innovation hub have an enabling and inhibiting contribution towards community resilience. The innovation hub performs functions that are core to its services for innovation and entrepreneur outcomes, internal to operational capability and capacity, external influence to work with the local ecosystem, and external concern where it may not be involved but impacts outcomes. The interaction of the innovation hub with other roles is reviewed to consider strategies to influence the impact on community resilience.

This research advances the body of knowledge through the relationships between the three constructs of the innovation ecosystem, the innovation hub, and community resilience, as well as the application of systems theory, actor network theory and critical realism for innovation ecosystems. Policy can benefit from guidance on planning and development related to multiple innovation ecosystem roles. Finally, practitioners can use the results to develop strategies and build sustainability into their business models.



Charleville Community radio presenter Robert Burns interviews Dr Chad Renando and Dr Gen Mortimer about community-led economic development projects with sustainability at their core

4. RECoE director's report

continued



Saleena Ham:
Social identity
influences in two
small Australian
rural communities

Social identity in rural communities can explain the common tendency to resist change. Well-established social identity theories explain how membership of social groups influences beliefs and behaviours. This qualitative social research gathered real-world data from two anonymous small rural communities in regional Queensland, Australia.

Eighty-nine interviews with residents were transcribed verbatim and coded for social identity phenomena using Fairclough's discourse analysis framework. Social groups define themselves with unique qualities. Insiders must comply with those qualities to belong and be trusted. There is a limited range of social groups in small communities and well-defined social hierarchies, reflected in local narratives of who has social legitimacy and privilege. In this research, these are referenced as Locals and the Old Families. Insiders in small rural communities will defend identity boundaries against newcomers or outsiders whose new ideas are framed as a disruption to norms or threat to identity. Defence includes social censure (i.e., exclusion, shame or blame or derision talk) and personal attack, extending to associates (family members and friends). Social censure is aversive; newcomers are mindful that to challenge

the community's dominant norms and narratives, implicitly or explicitly, is to risk being socially safe. Being socially censured in a small community, where there is little compartmentalisation, is life-affecting. Such social dynamics anchor the community within a relatively rigid master narrative of acceptable local identity and the status quo. Mechanisms to foster change include supporting additional narratives under the radar, building social support networks for divergent local leaders, fostering personal connections across the marginalised social sets and building personal exposure to diversity, framed as non-threatening and part of a legitimate celebrated broader identity of the rural community.



Marlyn McInnerney: Rural women and their leadership role in communities

This research investigated how the discourses that frame women in farm families in central Darling Downs and South West Queensland, Australia, enable and constrain their wellbeing, resilience, and empowerment. The study also addressed calls in the literature for more research into the culture and dynamics of farm families. Through the process of in-depth interviewing and the application of a post-structuralist perspective to construct knowledge, this study uncovered new insights into the situation of women entering the discursive cultures of family farms, how love of the land becomes more motivational for them than is widely acknowledged, and how they employ resilience and empowerment strategies to attain their wellbeing goals.

The data analysis revealed three dominant discourses that framed the lives of women in this study: agrarianism; masculine hegemony; and neoliberal farming-as-abusiness. While agrarianism generated aspirational wellbeing goals, the conservative traditional masculine hegemonic discourse often constructed obstacles for the women to navigate. Nevertheless, this same discursive reality augmented the agrarian ideal of family farming passed from generation to generation. Hence, although this masculine hegemony discourse might contribute

to preventing women from achieving full participation in family farming, it simultaneously increases their belief that the family farm is the highest priority, to be worked for and protected. The discourse of farmingas-a-business has had adverse consequences for the family farming sector and their communities, but simultaneously provided women with empowerment opportunities within their farm businesses.

This study concluded that women in farming families should be acknowledged and respected for their contributions, for their innovative and holistic ideas and for their strategic resilience and empowerment abilities. They are a key resource for the future of the agricultural sector in terms of economic viability, sustainable land management and the vitality of rural communities, in the face of current challenges such as climate change, and unknown future adversities and threats to the rural sector.

4. RECoE director's report

continued



Hannah Churton: Waste stream development in vegetable supply chains

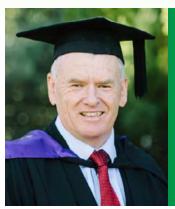
Food loss and waste (FLW) is a major global issue with one-third of all food that the world produces lost or wasted (Gustavsson 2011). Australia alone produced 7.3 million tonnes of food waste across the supply and consumption chain in 2016/17 (ARCADIS 2019). The economic, environmental and social costs of this waste are significant. In 2015, SARDI estimated that food waste cost the Australian economy \$20 billion each year. It further estimated that 7.6 million tonnes of carbon dioxide equivalent would be generated from food waste disposed of in 2014–15 over the life of its decay. Food waste accounts for more than three percent of Australia's greenhouse gas emissions (Australian Department of Agriculture, Water and Environment 2021).

The FLW problem is prioritised in United Nations Sustainable Development Goal Target 12.3 (UNGA 2015). In line with Target 12.3, Australia has committed to halving its food loss and waste by 2030 with a view to reversing its negative economic, environmental and social effects (Commonwealth of Australia 2017). One avenue for meeting the target is by diverting food waste to 'high-value destinations' through biorefining into new products (Champions 12.3 2017). To meet the target, the National Food Waste Strategy Feasibility Study (FIAL 2021) has assessed that Australia will need to rely in-part on extracting nutrients from horticultural food loss and waste (HFLW) through biorefining processes.

Biorefining refers to the transformation of renewable organic feedstocks via sustainable processes to produce valuable products (IEA Bioenergy 2014). The processes by which this transformation occurs are broad but can be grouped into three categories: chemical processing, biological processing and thermochemical processing (de la Torre 2019). The resulting products are similarly diverse and are categorised as either energy-driven biorefining (e.g. power, heat, biofuels), and productdriven biorefining (e.g., bioplastics, pharmaceuticals, nutraceuticals and cosmetic applications) (IEA Bioenergy 2014). Energy-driven biorefining generally produces large quantities of low-value energy products as opposed to product-driven biorefining which generally produces small quantities of high-value, non-energy products (IEA Bioenergy 2014).

At the point of primary production, HFLW accounts for 31% of food loss and waste in Australia (ARCADIS 2019) and costs the Australian economy AUD 2.6b. HFLW contains valuable nutrient components that can be turned into high value products through biorefining processes. The specific chemical properties for HFLW are broad and offer many biorefining pathways for the valorisation of that waste. Waste components (including seeds, peels, rind, skins, pomace and pulp), contain valuable essential oils, pectin, vitamins, minerals, trace elements and bioactive compounds such as phenolic compounds, glucosinolates, flavonoids, and carotenoids (see Mirabella et al 2014; Nayak and Bhushan 2019; Gullon et al 2008; and Patsalou et al 2017) that once produced can be returned to the human food supply chain or used in materials and products not for human consumption.

This research proposes to examine the biorefining industry in Australia and its potential for contributing to food waste objectives by converting horticultural waste streams into 'high-value' products (i.e., non-energy products). Specifically, it will consider the influence of policy on the industry and its development potential.



Carl Manton: How have Queensland local governments been impacted by full cost pricing and outsourcing initiatives?

This research considers how two neoliberalist policies have affected the operations of Queensland local governments. This research aims to address the following research question: "What impact has full cost pricing and outsourcing initiatives of local government services had on local governments throughout Queensland?"

The target population will be the 77-gazetted local governments in Queensland. The outcome of the research aims to inform key stakeholders of the impact of full cost pricing and outsourcing initiatives on Queensland local government operations.



4. RECoE director's report

continued



Moudassir Habib: Improving adoption of temperature monitoring technologies in the vegetable value chains: A case study of South East Queensland

Globally, it is estimated that around 30% of the food produced for human consumption is wasted annually due to a lack of proper management along the chain (Jan, Tistivint et al. 2013). The agri-food chain alone in the US loses up to 40% of its food from production to consumption (Gunders and Bloom 2017). In Canada, it is estimated that \$25 billion worth of food is wasted each year (Young 2012) and approximately 10% of the fresh produce from farm to fork is wasted in Europe (Jedermann, Nicometo et al. 2014). In the horticulture sector of Australia, it is estimated that around 18–22 % of fruit and vegetables are lost during the production and processing/packaging stage in the chain (CSIRO 2019).

Fresh fruits and vegetables are commonly highly spoiled products where more than 50% are wasted and the predominant reason for this is related to insufficient control of the temperature along the chain (Hundy, Trott et al. 2016). These overwhelming statistics of food waste not only warrant efficient management of temperature but also an attempt to meet the goals of global food security challenges. In principle, food wastage can be minimised by controlling and monitoring temperature along the chain. This measure will also improve the quality of the product, enhances customer satisfaction and in the end positively contribution to the challenge of overarching global food security.

Temperature management along the chain also enhances product quality, safety and shelf life (Óskarsdóttir and Oddsson 2019). The quality of fruits and vegetables is primarily evaluated from sensorial, nutritional and safety aspects. At the retail stores, the sensory quality of fresh produce including appearance, colour, flavour and texture would affect the consumer buying behaviour and deterioration of these qualities would influence the shelf life and also the acceptance of the product by the consumers (Ma, Zhang et al. 2017).

Furthermore, traceability of temperature along the supply chain of perishable products such as vegetable produce is integral in ensuring food quality and safety and enhancing the shelf life of the product. Numerous technologies are currently available to trace temperature monitoring in the chain. The most common technologies that capture the temperature data in the food chain are temperature data loggers, radio frequency identification temperature tags and sim and non-sim based wireless sensor networks. However, the adoption of these temperature monitoring gadgets along the chain is still an issue. Therefore, the purpose of this research is to investigate the process of adoption of temperature monitoring technologies across the vegetable supply chain. This is addressed by investigating the innovative, organisational behavioural and social factors that drive temperature monitoring technologies adoption from the lens of the whole chain approach including producers and associated industries including technology providers in the vegetable chain in southeast Queensland using case study approach.

A key outcome of the research is the design and development of guidelines which may include procedures or processes to identify key blocks to the adoption temperature monitoring technologies in the vegetable value chain and to highlight approaches to overcome these and improve the use of these technologies.

Wendy Strachan:

How do people in agricultural communities perceive the extent and effects of corporate farming in their regions

The aim of this research is to explore how people in agricultural communities perceive the extent and effects of corporate farming in their regions. The study will show how Australia's rural and regional communities have played a substantial role in the economic development of Australia. However, latest trends indicate an increased presence of corporate managed farms in areas where farms have traditionally been owned and operated by families.

There is little known on the social and economic impact of corporate ownership on rural communities. Findings from this research will provide a unique contribution into the perspectives held by rural communities relative to the increase of corporate farming in Australia. Findings may inform government policy makers on ways to ensure the long-term survival of rural communities. This research will hopefully contribute to the body of knowledge by providing information beneficial to organisations such as town councils, demographers, and financiers. Also, academia may benefit from both the results and the findings of this research due to the rigor of the mixed method approach.

5.

Methodology for the evaluation

The review adopted a mixed methods approach to evaluating RECoE's outcomes and impacts. Methods included:

- The milestones include in the DAF/RECoE contract
 were listed in a table and the deliverables completed
 by RECoE noted against each one. This represented a
 quantitative analysis of achievement of milestones,
 and is summarised in Section 6.1 and attached as an
 appendix to this document.
- Feedback from participants of short course workshops were reviewed. This provided a quantitative evaluation of an important deliverable, and is provided in Section 6.2.
- Stakeholders were interviewed by zoom which provided qualitative feedback of impact and outcomes achieved. Details are provided in Section 6.3.

The results of the three methods were used to inform the conclusions of the evaluation.

It should be noted that the qualitative method of conducting semi-structured interviews with purposefully-selected interviewees is an effective means of identifying issues and themes within a population. However, it cannot determine the extent to which those issues may exist within the entire population, as the data is not drawn from a sufficiently large nor random sample.



6.

Results of the evaluation

6.1 Table of deliverables

Appendix 1 has been prepared by duplicating the table of milestones contained in the contract and the addition of a column of achievements. Where the deliverable was a published report, as was the case in the vast majority of instances, a link has been provided to the published report. Where a report has been published in a journal, the report has been referenced accordingly. Where the achievement has been other than a published report, a comment describing the deliverable and achievement. Please note that some report links have been used against more than one milestone. The reason for this was that an initial report was enhanced and built upon by subsequent activities, and the final report was provided against both milestones.

As the appendix demonstrates, all of the deliverables listed in the contract have been achieved. A summary of the outputs is provided in Table 1.

Table 1: Summary of outputs

Type of Output	Qty
Papers published on RECoE website	21
Participants trained in community development	102
Participants in webinars 2020–21	>600 registrations
PhD candidates commenced	7
PhD candidates completed	3

6.2 2019 Economic Development Workshop – participant feedback

The contract required RECoE to build capacity of rural economic development practitioners and rural and regional leaders (Milestones 4.4 and 4.5). This was an important milestone because it leveraged RECoE's effectiveness and impact by building capacity in regional communities. A series of workshops and lectures were provided in Cairns, Rockhampton, Longreach and Toowoomba. Participants were invited to complete a survey of participation at the conclusion of each.

To demonstrate the breadth and depth of participants involved, Tables 2 and 3 have been prepared from the workshop registrations. Names and contact details have been excluded, as were entries with incomplete information which is why Table 3 does not contain details of 91 participants.

Table 2: Summary of participant employee groups

Employer Groups	Number of Participants
Regional Councils	36
DSDMIP	18
DAF	14
Department Small Business and Training	1
Economic Organisations and Consultants	17
University	4
Private Local Companies	7
Department Premiers and Cabinet	2
Government Project Officer	1
Total	102

Table 3: Sample of participants at workshops

Job Title	Company
	Rockhampton Regional Council
Senior Executive Economic Development	Advance Rockhampton
Senior Executive Industry Development	Rockhampton Regional Council
Principal Economic Development Innovation Officer	Livingstone Shire Council
Industry Development Officer	Department of Agriculture and Fisheries
Economic Development Officer	Mackay Regional Council
Economic Development Officer	Mackay Regional Council
Manager	DSDMIP
Manager Industry Development	DAF
Industry Development Officer	Department of Agriculture and Fisheries
Senior Industry Development Officer	Department of Agriculture and Fisheries
Agricultural Economist	Department of Agriculture and Fisheries
Associate Vice-Chancellor Central Highlands	CQ University
Councillor	Gladstone Regional Council
Manager Economy and Place	Livingstone Shire Council
Director – Corporate Services	Barcoo Shire Council
Economic Development Officer	Longreach Regional Council
Economic Development and Tourism Manager	Longreach Regional Council
Principal Stakeholder Relationship Officer	Department Premier and Cabinet
Grazier	Kateroy Grazing
Manager Resources and Planning	Department of Agriculture and Fisheries
Community Development	Goondiwindi Regional Council
CEO	Burnett Inland Economic Development Organisation (BIEDO)
Regional Manager Sthn QLD	AusIndustry
Economic Development Officer	Department of State Development Manufacturing Infrastructure and Planning
Grants Officer	Bulloo Shire Council
Economic Development Officer	Scenic Rim Regional Council

continued

Job Title	Company
Manager (Training Development)	DAF
Senior Economic Development Officer	Department of State Development, Infrastructure and Planning
Senior economic development officer	DSDMIP
Regional Economic Development Officer	DSDMIP
Economic Development Senior Officer	Western Downs Regional Council
Economic Development Manager	Western Downs Regional Council
Regional Economic Development Officer	Toowoomba Regional Council
Program Manager	Department of Employment, Small Business and Training
Consultant	Engage and Create Consulting
Consultant	Engage and Create Consulting
Community Development Officer	Toowoomba Regional Council
RED Grants Scheme Administrator	Queensland Rural and Industry Development Authority
Economist	QRIDA
Farmer	Bellisle Farming
Regional Jobs and Skills Coordinator	Lockyer Valley Regional Council
Senior Economic Development Coordinator	Lockyer Valley Regional Council
Senior Economic Development Officer	South Burnett Regional Council
Economic Development Officer	South Burnett Regional Council
Data Manager	Binarri-binyja yarrawoo
Regional Project Coordinator	FNQROC
Agronomist	AFRICAN Dream Initiative
CEO	Wujal Wujal Aboriginal Shire Council
Senior Economic Development Officer	Department of State Development Manufacturing, Infrastructure and Planning
Senior Executive Office	Tablelands Regional Council
Senior Information Officer	Mareeba Shire Council
Executive Officer	Torres Cape Indigenous Council Alliance (TCICA) Inc
Manager	Working Visions
Chair	Northern Gulf Resource Management Group
Student	JCU
Economic Development Officer	DSDMIP
Unemployed	Unemployed

Job Title	Company
Economic and Business Development Consultant	North Queensland Land Council
Senior Economic Advisor	DSDMIP
Policy and Economic Development Manager	Advance Cairns
PhD Student	JCU
Industry Development Officer	Department of Agriculture and Fisheries
Business Development Manager	Australian Rail Track Corporation
Economic Development Officer	DAF
Principal Economic Development Officer	Toowoomba Regional Council
Regional Skills Investment Strategy Coordinator	Goondiwindi Regional Council
Officer Economic Development	Gympie Regional Council
Economic Development Officer	TRC
Founder	Goondiwindi Region
Principal Economic Development Officer	Department of State Development Manufacturing Infrastructure and Planning
Manager	Belisle Farming
Relationship Manager	CBA
Economic Development Officer	Western Downs Regional Council
Coordinator	Freelance Coordination
Principal Economic Development Officer	DSDMIP
Senior Economic Development Officer	Department of State Development, Manufacturing, Infrastructure and Planning
Principal Stakeholder Relationship Officer	Department of the Premier and Cabinet

continued

Table 4 summarises the quantitative responses to specific feedback questions obtained from 66 responses from 91 participants.

Table 4: Feedback from workshop participants

Que	on Rating						
		0	1	2	3	4	Rating scale
1	What Level of expertise do you feel you have in community engagement prior to workshop	3	4	13	37	9	None – A Lot
2	To what extend did the workshop add value to your existing knowledge and experience of rural economic development	0	1	6	28	31	None – A Lot
3	How comprehensive was the content of the workshop	0	2	6	19	39	Not – Very
4	Did the workshop over the content in sufficient details and depth	0	0	6	26	34	Not – A Lot
5	How easy was it to understand the content	0	0	1	15	48	Not – Very Easy
6	How relevant was the content to your role	1	0	7	24	34	Not – Very Relevant
7	How well were approaches and information conveyed during the workshop	0	0	3	17	46	Poor – Excellent
8	How much did you gain from the discussion and deliberation during the workshop	0	0	3	20	43	Nothing – A Lot
9	How easy would it be to apply the skills and knowledge from the training in your day to day work	1	0	5	30	30	Not – Very

The responses provide very strong evidence that the workshops and material provided were relevant to attendees, that the way the workshops were conducted was engaging and that participants generally valued the opportunity to develop their skills in community engagement.

Table 5 provides details of the qualitative feedback provided in response to specific questions. These have been recorded by RECoE and the suggestions will be incorporated into future engagement, training and workshops.

Table 5: Written feedback from workshops

Question	Written responses
What did you want to learn about rural economic development at the	 Application of knowledge Developing Strategies and Opportunities Useful tool or Educational Opportunity Businesses to invest in their work force
start of the workshop	 Learning from other successes Developing better collaboration across all sectors – Govt/Non Govt

Question	Written responses
What difference has the short course made to your understanding and application of rural economic approaches	 Better understanding of academic framework Interesting content and examples helped understanding Economies is just not about \$ Alternative solutions Collaboration, engagement and partnerships essential to success Qualifying the social costs/attributes to economic development New tools and perspectives to consider Opportunities for Regional Queensland
What aspects of the short course did you find most useful	 Better understanding of the 3 levels of government working together to achieve outcomes Content grounded in reality and practicality Framework well explained Learning from other regions Networking Group discussions and networking Diversity in economic strategy approaches Modelling frameworks well explained
What improvements to the short course would you suggest	 Work through a manual would make the presentation feel more structured Future presentations showcase studies and success outside this region More content on Rural Business Development rather than Community development. E.g. Co-ops Break up into smaller deliverable workshops More regional specific examples More time to work through case studies and application of methods and tools Keeping everyone connected after presentations
Any other comments	 Happy to send other staff to future workshop Presenters knowledge and experience ensure quality workshop Great Opportunity for the region Would like to attend more workshops Would like workshops to be held in Townsville Follow up short courses on rural innovation and strategic planning Well run and very enjoyable and interesting workshops – Jim will be missed

The qualitative feedback provided in response to the workshops in Table 5 is consistent with the quantitative data and provides insights for future engagement opportunities for RECoE.

continued

6.3 Stakeholder feedback

A total of 40 stakeholders and participants of RECoE activities across all regions (Far North, Central and Southern Queensland) were purposefully selected and invited to participate in semi-structured interviews, conducted by Zoom, around the discussion topics listed in Table 6. Of these, 18 agreed to participate. Interviewees were provided with assurance that their feedback would be de-identified and reported in ways that protected their identity.

Qualitative data analysis is a process of data reduction. In this instance, data reduction involved interviews that were recorded, then fully transcribed. Transcriptions were then analysed to identify themes, and these were summarised and reported.

Table 6: Discussion topics used to guide semistructured interviews

Discussion topics

Please briefly describe your involvement with RECoE including the specific activities in which you participated.

Could you please explain how you feel each activity went in terms of organisational efficiency and effectiveness?

To what extent and in what ways do you feel the RECoE activity benefitted you personally?

Can you identify and explain the ways in which a local or regional situation was influenced or changed as a result of any RECoE engagement, activity or series of activities?

Can you explain how you feel RECoE activities may have benefitted the local or regional community?

From your experience with RECoE, do you have any suggestions for RECoE and its partners in what and how it might better make a contribution in the future?

Is there anything else you'd like to comment on regarding RECoE's effectiveness and impact?

For the purposes of reporting the results of interviews, details that could be used to identify individuals such as responses to the first discussion topic, have been omitted. Results are provided under the following themes which match the discussion guided by the discussion topics. It should be noted that the methodology of qualitative research does not allow the results to be generalised to the population. Quantitative studies are required to do that. The aim of this research is to provide an understanding of how informed stakeholders and participants have experienced RECoE and to reflect their experiences and observations.

6.3.1 Organisational efficiency and effectiveness

The themes and terms that were used to describe RECoE's organisational effectiveness and efficiency are listed in Table 7, and a sample of quotes from interview transcripts that provide those terms and themes follows.

Table 7: Themes that describe organisational efficiency and effectiveness

Themes related to organisational efficiency and effectiveness

Very effective and efficient. Highly valued

Underfunded

Effective and valued leadership

Flexible

Well organised

Somewhat bureaucratic, being part of university system

First year or two was required to 'find their feet'

Takes time to secure funding to allow programs to continue



Overall, interviewees across all regions had very favourable experiences and observations about RECoE's efficiency and effectiveness. For example:

I couldn't speak more highly of what's transpired; I think it's been fantastic.

It was highlighted that it seemed to take some time for RECoE to 'find its feet'. Interviewees commented that they felt more funding and personnel would ease the load off Ben Lyons who is highly regarded. As one interviewee commented:

I think like most organisations, they're probably underfunded and under resourced to deliver what they do. They have an incredible capacity because of the of the skill sets that are in existence, to leverage projects that are arising at a community level. And then, yeah, just my view, their effectiveness is very high. But again, stretched very thin.

Even as far away as remote far north Queensland, interviewees commented favourably about the efficiency and effectiveness of support they have received from RECoE:

honestly, I can't speak highly enough about their involvement with those two main activities. Very professional, well organised, and really good facilitation skills, and have to say, very easy to work with as an organisation. As I think I mentioned earlier, we couldn't have organised the Business Symposium without their support. It was a practical, on the ground type of support as much as anything. So, from that perspective, I think the support has been great.

Another interviewee referred to the ordered structure in which projects and contracts were managed:

I really appreciated that it was very clear around my milestones of what was needed to be delivered, and by when. There were always regular meetings. And that's probably the same for some of the community projects as well. There were always lots of good check-in points where we could see what was working what wasn't.

continued

The ability to be flexible and to respond to the needs of communities and allow projects to proceed at the rate at which communities were able to manage them was also seen to be very important:

enough ability to flex and bend if things weren't exactly going the way we thought they would. That always seemed to be built in somewhere. I don't know if that was causing chaos at the other end for somebody else, but certainly as a community person engaged in some of the projects we didn't ever see that, if that makes sense.

One interviewee reflected on the investment in time required to build the collaborations between four universities and the complexities around being a start-up, in the beginning:

The things I've been involved in have been well organised. Like all of these things, they formed RECoE from quite a diversity of interests, and they had quite a wide range of things they were trying to do. So I think, there was quite a bit of time early on in the organisation building the collaboration between the universities and finding out where its value-add might be.

...it took some time for RECoE to actually find its feet. And so I'd probably say those first two years, were really about USQ trying to work out what was RECoE, trying to work out how to work within a university. And then these last couple of years, I feel like I've really seen, you know, RECoE hitting it straps in that sense.

And from Far North Queensland, a reflection that securing funding for follow-up programs hinders a continued and efficient delivery of what has been planned and partly-implemented:

we've put together a governance group, but then I think we had a couple of meetings, but then we haven't been able to meet for two key reasons.

One, we haven't got the funding for the next phase of the program. And two, you know, COVID just really got in the way of everything.

Interestingly, the topic of Covid and its impact on outputs was not really raised as a major issue, but it did receive some comments about how activities were managed despite Covid:

we've managed to somehow sneak the 10 day expo in the middle of COVID last year. We delivered a safe and very effective event. And as I said, we got lots and lots of really good and positive feedback about the expo.

Finally, there were suggestions and comments that whilst RECoE presented as very 'business-like', it seemed as though it was somewhat hampered in its capacity to get things done by university bureaucracy:

they do have probably some constraints around the bureaucracy of the universities sort of hindering I think, at times, you know, there seems to be paperwork sort of elements that needed or steps that sort of maybe complicated at it their end at different times, and it didn't necessarily create long delays or anything, but it just probably could have been a bit smoother.

6.3.2 Personal benefits from RECoE activities

The themes and terms that were used to describe personal benefits obtained from being involved in RECoE's activities are listed in Table 8, and a sample of quotes from interview transcripts that provide those terms and themes follows.

Table 8: Themes related to personal benefits gained from involvement with RECoE activities

Themes related to personal benefits

Learning from experienced academics

Learning about community development

Learning about report writing

Access to academics who see things more holistically, from the 'outside'

Linkages outside the local and regional community

Building resilience through networking, knowledge and access to information

Access to a 'sounding board' of academics

Interviewees described a range of benefits they had personally achieved from their involvement in RECoE activities. The way that RECoE has undertaken its engagement within communities and has allowed communities to be involved in and lead activities was highly valued because of the learning and personal development that accompanied the projects delivered by RECoE:

Learning from the processes and activities undertaken by experienced academics

Professionally, I find the perspective and the skill set and the academic integrity of Chad and Ben probably are the two that I've had most engaged with, like, professionally, I've benefited enormously from the work that Chad has done on behalf of RECoE for Red Earth Community Foundation. And as a consequence that also provides great benefits to government and

corporation in the region because that work is not ring fenced in one organisation's charter. It actually is on behalf of, you know, a large regional and rural area across the Burnett and wherever those touch points are, so definitely, I would rate that very high.

Another interviewee:

I learned a huge amount through the process. It was the first time I'd had any involvement in producing this type of report. I was able to attend interviews which was great, and to see the reaction of people who were contributing information. The way the interviews were done was so respectful.

And

I also value the contact with the researchers. So for me, as a generalist, I've found it very useful to be able to connect into different research topics and strands. And so when I look workforce capability and things that was really interesting to be working on that 18 months ago, when no one was talking about workforce capability and shortages. We don't have strong connections in Australia, between researchers and the rest of the world. And so RECoE can provide a very strong link, I think, between that research and fact based work, and practitioners on the ground in regional Australia.

And again, access to practical people with academic and research skills and backgrounds:

I think personally, it's nice to have someone that's got that sort of level of intelligence and interest, but also the academic backing around what has historically worked or not worked or what the research is saying and certainly no doubt that Ben in particular brings a very high intellect to the table when you've got him involved in a conversation so it's yeah, I'm personally very much appreciate that. That sort of person that you can call on to ask different queries or to engage in a conversation about where we might be heading.

continued

Creating more resilient communities in which I live and work because of stronger linkages and networks

I think personally, I have a more resilient community I get to be part of, I think my networks are stronger. I think, both personally and professionally for me, it's good for me to meet people out of my own sandbox sometimes. And I think that certainly that's got a lot to do with Ben as an individual. He's very generous of spirit and, you know, has got the right values base I think, is amazing. Yeah, I think personally, I've been involved, I've been able to sort of feel that I've contributed to something bigger in the region, feel connected, less isolated, which I think for some of us in regional areas is really important.

Build networks and stay connected:

It's been a really good opportunity personally to stay connected, and then perhaps provide an external perspective, from someone who's not in the midst of Queensland rural politics. And I've really enjoyed that. I really enjoyed the collegiate atmosphere. So it's been an absolute pleasure.

The benefits of building networks may be greater the more remote from southern Queensland the participants are. For example, from Far North Queensland:

you know, these sorts of roles can be pretty lonely. So to know that you've got a network of people that you can engage with is really useful.

Being external

Their work is fantastic, and has been while ever I've had any involvement with them. They've always been a willing sounding board and they have the experience and the knowledge base to draw on as a great sounding board, and the network as well.

6.3.3 Benefits to the region

The themes and terms that were used to describe benefits to the region of RECoE's activities are listed in Table 9, and a sample of quotes from interview transcripts that provide those terms and themes follows.

Table 9: Themes and terms related to regional benefits

Themes related to benefits to the region from RECoE activities

Provision of data and evidence facilitated, informed and empowered community-led planning

Community-led long-term planning is better than the shorter-term plans of government stakeholders

Communities of people have been mobilised to participate in co-designing plans for their region

Groups continue to organise guest speakers, tours and other activities to build community and entrepreneurial spirit and support innovation

Outward-looking networks and contacts of universities contribute to data and information being made available to support community-led planning

RECOE has the skill to facilitate community-led planning in ways that community members actually are, and feel they are, empowered

Community-led projects are facilitated in ways that bring together a wider group of stakeholders than otherwise may come together

Community-led planning does not happen quickly, and can only proceed at the rate at which community members can participate and contribute

Having RECoE people visit regions is very important, even critical for successful outcomes

These things just take time... but it is important to continue.

Agribusiness value-adding and supply chain management opportunities also exist

One of the more significant themes to emerge from the interviews was the value to regions of long term / strategic planning 'as a region', rather what was referred to as the much shorter planning horizons of multiple Councils and other entities that operate within regions.

Just the way that they enabled that concept to become a real report which had evidence base as to the way in which we were trying to define a way forward for a gap in what we identified originally is that there's no one organisation leading a long term visioning codesign strategy process for the Burnett Inland and that's just a result of you know, where we're located, you've got 3 federal government electorates, you've got 2 state and 5 local government areas.

Another interviewee reinforced this regional benefit: Helping regions to adopt long term holistic strategic planning is very important. RECoE can really strengthen a region's capacity to undertake long term holistic planning. This is really needed in regions. Short and medium term planning can be done by Council, but holistic long term planning requires a different approach, and RECoE has demonstrated how to do this. Their work is ground breaking! It's a wonderful legacy being left by RECoE in the region.

Even as far away as Far North Queensland, the use of data and telling stories has been, and is being, used to facilitate change (but much more time is required):

I hopped onto the RECoE website, and it's very impressive. There's clearly lots of research being done, and those sorts of things. And again, for me, living up here, it's how we take that knowledge base and utilise it to make a difference on the ground up here. And one of the things I've learned to do is, just tell stories, I suppose, as much as anything and use data to, you know, to tell a story. And the one thing that I find really brings it home to people is just a simple statistic, you know, from Torres and Cape Hospital and Health Service, the

average age of death of people is 15 years, 15 years less than the rest of Queensland and Australia. You know, so there's some fundamental things that we need to get in place and change that needs to be driven to, improve that. So, that's why these sorts of things, I think we've got some really strong foundational work done and that we need to take that and drive some change, and deliver things. Game changing things on the ground as it were.

The importance of facilitating communities and stakeholders to take ownership was emphasised:

I think the way it was done was, it was engaging. It was also, considering all the different stakeholders involved, professionally done. And I suppose that sometimes the most difficult thing to do with these types of endeavours is to get everyone on the same page. That process was over three or four separate face to face engagements, and then also a lot of work through Advance Rockhampton, really helped to pull everything together. So, you know, I couldn't speak more highly of how Allan sort of approached that. I think collaborative is probably the best word for it. Some things that you do see with others is that they try to come in, and then basically just drive it themselves. Whereas what I think Alan was able to do, was very much he was he was a facilitator in the process. And yes, whilst sort of now and again, you'd need to sort of prod a few people. It was really the community here that was driving that process. And so I think it from an engagement point of view, being an engagement specialists, I think it was exceptional.

continued

Nothing can provide more convincing evidence of RECoE's success in facilitating regional development initiatives than:

we've moved from pieces of paper on a shelf, to how do you actually mobilise regions to own their future. And that's the change. You know, we've got 85 people coming on Thursday, and basically, it's the next stage and how do they codesign their future. We're able to, you know, we certainly got this forum off the ground before we had the report, but Chad's report enables us to speak very clearly to the issues in the region. And so it's this layering up effect of what's critical and what's important and reports and not going to do it.

Another significant observation explained how a community was brought together and motivated to collaborate for the benefit of individuals and the community:

that became the backbone around creating networking opportunities, sharing information, encouraging some of our innovators to participate in some of the activities that are happening in the Queensland space. They've done some tours as a result and we've had guest speakers in so there's been a range of really positive activities around that entrepreneurial and innovator space that have come as a direct result of the RECoE work.

And

They (RECoE) were involved in reviewing, essentially what Goondiwindi has to offer, and provide a bit of a plan in terms of some of the things that we might be able to do from establishing ag tech or an innovation ecosystem. So since that, we established the Goondiwindi Region Innovation Network. And we've had a couple of small wins. Now, obviously, being a small community, we're talking about, you know, 10, innovators, not hundreds of 1000s of people. And so, it's had quite a good impact.

The use of evidence by RECoE to help people make sense of the reality of their regional situations was referred to by several interviewees, and is obviously an important part of the process of helping communities build resilience by planning for the future. An example from Burnett region:

Well, it gives me the ability to speak with a level of authority now, because the evidence is established behind that report. And that could be you know, the fact that RECoE analysed 16 strategies or have different agencies or local government or state areas around that region. It's the evidence that there is no planning beyond 2025, which enables me to genuinely flag that with a whole range of major stakeholders, including funding bodies were looking or supporting that the Burnett Inland. The evidence is clear; that's a risk. It's presented evidence that's backed by research.

Another, from Goondiwindi:

I think one of the things that the RECoE activities have brought, which is sometimes undercooked in the region, is actually balancing qualitative data with quantitative so they've brought the data or the research or they've been able to kind of challenge some stuff, but me personally, as well, if I'm saying something, you know, Ben can say, well, hold on a second, actually, all of our research doesn't align, or yes, that's exactly what it's so I think that is important, actually, that communities can ground truth, some of that. And if it's not, right, well, then we need to find the research or do the research or whatever. So I think RECoE's done a really good job of working alongside communities to help them see how true a story that is.

Another expressed it another way, again highlighting the importance of presenting factual evidence to communities:

this is stage one of a three stage project. So it provides clarity and evidence on which to build stage two and stage three. So for me, it provides quite clear, a quite clear framework to go forward, but it also coalesces people around a common, you know, topic, issue, challenge, as well. So it gives everybody the clarity of perspective. But it's not possible when you don't have the facts in front of you. When you have really big challenges in regional communities, it's almost too big that people don't know where to start eating the elephant. Whereas by getting some evidence and some facts in front of you and saying that other regions have done something it now gives people okay, well, let's have a go at this.

When asked how RECoE achieves the outcomes it does, interviewees referred to the facilitated networking opportunities that allow communities to connect with good sources of information provided by RECoE as being very important and valuable:

they've got that university network that whole, yeah, they're just connected at all, at so many levels, that network is what creates the benefits. I know personally, I follow a lot more professionals and different organisations and academics and universities now on LinkedIn, because of the relationships that I've been able to have with Chad and Ben, John McVeigh.



continued



Another interviewee commented, along the same lines: Extremely professional but very grounded in terms of their connectivity with people. If there were any preconceived ideas with universities' inability to communicate with people in communities this was not the case with RECoE. RECoE people were willing to go to people; sit around the kitchen table. So important when it comes to building relationships to understand the fundamental issues; that type of genuine authentic engagement is so important. Were prepared to travel anywhere to do the work. The knowledge and expertise they brought into the region was great.

The importance of facilitating projects which are, and are seen to be, community-led, was also identified as a really important process adopted by RECoE:

In the Burnett region:

So I think the good thing that has happened in the projects that I've been involved with is they have definitely been community-led. So whilst there was a framework that was, you know, semi structured around a contract or around, you know, some financial arrangement, and it's been organised and the structure has certainly been there, but there's been enough planning by somebody else somewhere, you know, RECoE, planned it well enough that the community can actually feel that they have led it. I think that's really important.

From Goondiwindi:

as a result of some of the work that the guys did, helping us establish the innovation network. That was an opportunity to bring different people around the table, you know, people that might not normally think that they've got the reason to be part of the same group. And I think that has helped us then when we need to have some challenging conversations. When we are looking at how we deal with a particular situation, we've got more people to draw on, if that makes sense; feel like we're not going to our usual two or three buddies, we bounce ideas off, we've got a bit of a broader story,

The importance of community-led projects was emphasised from within the Goondiwindi region:

I think their model of engaging regionally based people to help with some of the engagement stuff, I think that's worked really well, I think that's added value, and I think that would be a great thing to continue. Certainly with, you know, with the government departments, it's always something that we are advocating for that, instead of, you know, employing more people in Brisbane to look after the regions, just employ, you know, contract more people in the regions.

Whilst all RECoE and USQ team members received very positive comments, one Goondiwindi region interviewee was particularly impressed with Jim Cavaye's contribution and approach to community development:

I think his (Jim's) stamp on RECoE, on USQ, you know, across this whole region is still pretty strong. Sometimes you can see really clearly what is needed, but you've just got to wait until the people come to the table with that idea. Jim could pick it in the first two minutes and 18 months later, the community be like, "Oh, this is what we've got to do". And he's like, "Oh, my God, that's the best

idea ever". And seriously, I would have been ready to stab myself in the eye 18 months earlier. But he just had this beautiful way of making sure that they actually lead their journey. And I do think that is, I do think that is very rare. It is a very rare skill. So it does mean, sometimes it might cost more, or a project might take longer. Or it feels really slow and messy. But that's almost, you know, if we get an easy final report, we maybe miss some of it.

The Burnett region appears to have been very active in taking advantage of RECoE's work in the region. A report on water security was used to secure funding for a feasibility study and according to one interviewee the report prepared by RECoE would almost have certainly have been used by others in the region also, e.g. to support the building of a new bridge based on the value of production in the region.

An interviewee in the Burnett region made specific reference to the lack of a university in their region, and the value of that RECoE provides by filling this gap: we were so grateful to have RECoE's input and guidance and expertise come into our region to really lead and contribute to key projects, like the ones that I've listed. We don't have a university located in north or south Burnett. So to have the extension of RECoE coming out into our regional communities is just so valuable. We were incredibly grateful for the opportunity to have them come and work on those projects. And we had great support from community and from industry, towards those projects.

continued

The importance of providing follow-up and continuing support was also mentioned. One specific example identified that RECoE had been instrumental in helping the Goondiwindi region to identify and promote employment positions available in the region. The interviewee commented that a single person, employed to promote the region, the jobs currently available and facilitate the attraction of people and families into the region could make a significant contribution to the region by helping to fill the (at least) 50 vacancies that exist at present. Support to find ways to fund this role is something RECoE could do.

We don't need like, infinitely scalable marketing and we're talking about 50 people. And so we can actually get pretty granular on how we achieve that. What we need is someone who's dedicated to literally going to universities and finding graduates to come and fill early positions that's actually going to train people and attract them to the region. We can actually get a bit more granular like that. I think that if, say for example, we had people that were funded to do that and budget to be able to go out and advertise and go to events, I think that would actually have a pretty outsized benefit. But it's not sexy, it doesn't have a research component attached to it. It's actually getting in the weeds and actually executing, on those types of things. And so that's probably a bit of an example is having that backup funding, and especially for some of these rural communities, like it's usually a person whose sole KPI is dedicated to putting 50 bums in seats, like, we can actually get pretty granular on that.

The simple truth that time is required to facilitate change and to secure the funding required the plans that have been developed during the past 4 years:

I think also the sorts of things that we're talking about, of, you know, sort of longer term, there really are very strategic sort of outcomes, which are teased out of the engagement. So, you know, in fairness, they're not the sorts of things that are going to be able to achieve quick wins. I think that we're talking about fundamental strategic sort of outcomes, which will take long to realise any outcomes. So I just I've been with Council for four years, it's been a whirlwind, and after four years, I'm just sort of feeling like, I'm at the point where I've got the networks, I've got the understanding of the issues and opportunities, and hopefully, now we can start to make a real difference over the next sort of five year period.

More evidence of tangible benefits for a region (CQ) was provided from the Fitzroy Basin:

So what it's really given to me personally is something that we wanted to get going four or five years ago. Thinking, well, we need to have a strategic plan about how we're going to grow agriculture. You know, we've got this amazing Fitzroy River, we've got good agricultural soils, five to six kilometres either side of the Fitzroy River for about 120–130, kilometres down river. So what's been able to be done to date, is it has given us a business case, that's now moving into the detailed planning. So we're looking at establishing agricultural precincts and also supply chain opportunities tied with that. We're looking into how does the land use currently in place for that lower Fitzroy? What is it at the present moment of time, and does that need to morph into something a little bit different. We're going into a very detailed planning foundations report, which is taking one of those key precincts, looking at the water distribution, looking at the roads, looking at also power and so forth, and telecommunications, and that will be a big template for us going forward.

The existence of new and emerging agribusiness value-adding opportunities was also highlighted in Central Queensland, but the market potential of these opportunities may yet to be confirmed:

So we've got a company that has now established around about 25,000 hectares of land, of which there's around about 2,500 hectares of land being developed for (commodity deleted). So they're looking down the track to processing. So I think, with (commodity deleted), there's a there's a good opportunity for a lot of value-adding also downstream from that as well. Value-adding could be a muesli. It could be any of the snacks and so forth. So I think just getting to that appropriate economy of scale, the other opportunities that we can sort of see from value-adding perspective is around spices as well. Australia's not really known as a spice producer.



6.3.4 **Suggestions and comments**

The themes and terms that were used to offer comments and suggestions to RECoE are listed in Table 10, and a sample of quotes from interview transcripts that provide those terms and themes follows.

Table 10: Themes related to other suggestions and comments

Themes related to other comments and suggestions

RECoE needs more people like Ben, John and Chad (and Jim)

Communities benefit by having research data and information presented to them so that evidence-based decision-making can occur

RECoE could define its mission more clearly, and be better resourced to focus on its mission

Defining a mission is challenging because RECoE needs to accommodate the needs of university system and partners and the KPIs of academics

Be careful to retain a practical approach and not be seen to be too academic

RECoE is developing processes that are valuable and important, and can create a state, national and international leadership position and reputation in community-led facilitation for regional and rural resilience

Difficult to differentiate RECoE from JCU

Opportunities to become more involved in facilitating entrepreneurship and business start-up may exist, perhaps especially in Far North Queensland

continued

Interviewees, when asked for other suggestions or recommendations, really want to see RECoE expanded with more people like Ben, Chad, Jim and John, to continue to do more of the same type of work that has been done over the past few years.

probably have another two or three of Ben and Chad skill sets. I mean, it's not just their skill sets, it's their life experience. It's their connection already into, you know, so many parts of the world, which brings back that perspective, into a critical time I think in regional rural Australia where you've got to innovate, you've got to adapt. You've got to have multiple opportunities. You've got to have multiple offerings, I guess to be sustainable. It's that education process, it's that support mechanism that enables an objective consideration of how a business or an agriculture business manufacturing business can adapt without it being a loss mindset, like it's a win win. They, you know, that really, is what gets this above just being another talk fest.

Another interviewee explained it another way:

I think going into the region, you know, I think having more extension, which means more people that are able to go out and, you know, I think back to the model that we used to have back in the day with DPI extension officers, and the relationships that were built directly with growers that were able to, you know, it's the basics of R&D. They are able to actually test and trial the research that's there. There's so much research that is done, actually putting that research in the hands of the people who can use it and who can test it and, you know, potentially implement it. I think is a big gap. And if the university was able to, if RECoE was able to have more people which would obviously require more funding but to be to be able to spend time like they have been out in the regions going forward, I think is you're going to see really great innovation, and hopefully things that come back to RECoE as well and help to inform some of the

academia as well. Hopefully it creates that two way sharing of information between particularly, you know, in regional areas, it's not just about an ag and what we grow, but there's so many other things that I think can be tested and trialled.

One interviewee commented that it may be time for RECoE to promote itself more widely so that more communities could receive the benefits already provided to the ones in which RECoE has worked:

to elevate third party endorsements of the work that they do. So that, you know, broader range of rural communities can really access and start to work with their skill sets and their networks, you know, to shape up their future.

Several interviewees suggested, perhaps because they can perceive RECoE and being somewhat stretched, that defining it's mission more clearly and sticking to it, might be prudent:

So I think one of the suggestions could just be getting some clarity around what does RECoE do, what it doesn't do, where it fits in with other things. I think that might that would help them then when they're doing stuff to be able to crack on and do that, because they're not spending half of a meeting, re-explaining where the bloody drought hubs fit in, and who's who, some of that sort of stuff. Because I think that is a challenge, because we know and love those individuals. I'm putting all of the guys in the mix here, this would be the same across all the regions, I reckon. Because we know and love them. And we know how brilliant they are. We kind of go to them for everything. And I think that would be very hard for them to say no. And maybe that's what's needed a little bit.

Said another way:

I think they need to look strategically at the interests and priorities of their academic partners. I think they need to have a hard look at where the government and department's heading. And then the third sort of piece in the Venn diagram, and the real art to it, is their own view of where they think things are heading because you really, you really make an impact in this space when you get ahead. So you start going to these funders saying, here's a big issue. It's coming, making the case for it, and then having work ready to go when it becomes important rather than chasing issues that are already been understood.

One interviewee even suggested RECoE could have a much bigger role across the state of Queensland and across the nation:

I think that other arms of government would do well, to actually get RECoE to do some evaluation work for them. So just as QRIDA delivers services for the whole of government, I think RECoE can do the same thing. So you've got, you know, Premiers Department trying to deliver regional forums, you've got, obviously DAF doing other things that are not being assessed by RECoE. But then you've got housing and all these sorts of areas, we've got some really complex issues, education, what we're doing around education and investment in regions and those sorts of things. So I think DAF would do well, to show some leadership by championing the cause of RECoE across other agencies, within government with a view to RECoE being able



6. Results of the evaluation

continued

to run the regional ruler over them. We're the most decentralised state in Australia, and our government has a responsibility to govern for the regions, but I'm not seeing rigorous evaluation of programs and projects within a regional framework.

One interviewee referred to RECoE as being somewhat academic:

it was a 90 page report. I don't think any of my steering committee read it, because it was very academic in nature had the outcome that we wanted, though, and certainly no complaints from that point of view. But if they were able to sort of, you know, it's probably just how do you get it to be an absolute of what we'd want as opposed to something that we're happy with? There was no complaints that we weren't happy to happy to pay. But I think they could be a little bit more practical and less academic in the way that they approach some of that stuff.

Another interviewee, closer to RECoE indicated that they need to understand what RECoE is trying to achieve. There are many things that Ben and Chad want to do, but insufficient resources to achieve them. Busyness is a problem. More effort to create a structure – work on the business – than working in the business. The same interviewee highlighted the opportunity for RECoE to create a global reputation.

It was also explained that it was somewhat difficult to differentiate between RECoE and JCU because of the long-standing relationship with JCU academics and team members. Perhaps this becomes more apparent as the distance from Toowoomba increases.

An interviewee in Far North Queensland explained that the region is often seen as 'one of Australia's last frontiers' and that they were surprised just how much entrepreneurship existed in the region, and reflected on the benefits of facilitating business success in the Far North:

People talk about opportunities but what people lack is the ability to turn those ideas into something practical and real world on the ground. There's lots of passion in and there's desire to create business and move things forward. But as I say, it's just translating that into action, and how do we actually achieve that? One of the things that we've been able to do recently is we've got funding from the federal government to finally establish a university hub here in Cape Town. And, you know, for us, I think that's going to be a game changer. So we're setting that up, the initial intention is just to get that operational. But then over time, I'd really like to build in two components. One is an innovation type hub and a start-up centre which tends to form part of these sorts of things. So that, you know, and then the other two aspects were tourism development and economic development sort of all. In the one sort of centre, we're not large enough to have individual centres. But if we've got a multi-faceted centre, I think that will really sort of help. So there's business incubation start-up, you know, the networking that happens around that the support that's provided, I think that's really what people are looking for.



7 • Evaluation conclusions

Conclusions from the data collected and analysed to assess RECoE's phase 1 impact and effectiveness are listed below:

1.

RECoE has successfully achieved the milestones established in the original contract agreement between USQ and DAF.

2.

RECoE has successfully formed collaborations of researchers and academics from the four universities that have contributed to the achievement of milestones. This took some time (interviewees referred to a couple of years) so RECoE's current level of effectiveness may not have been achieved until well into its term.

3.

RECoE has demonstrated a capacity to contribute both transactional and transformational outcomes. Examples of transactional outcomes are the many papers that have been published as included in the Table of Milestones attached as Appendix I and even more listed on the RECoE website. Examples of transformational outcomes include the community-led projects which have been so welcomed and valued by regional and rural communities.

Communities do value the work that is being done by RECoE. They especially value the way community members are facilitated to lead holistic long-term (strategic) planning within and for communities.

5.

It is clear that holistic long-term regional community planning can only proceed at the rate at which communities can resource them, and periods of several years may be required even to establish even early milestones. A willingness to be patient and persistent, and to work within communities, are characteristics that are highly valued by communities, and required for successful outcomes.

6.

The opportunity exists for RECoE to leverage its learnings of the past 4–5 years and to facilitate holistic long-term regional community planning projects in more regions, but it may currently not be sufficiently resourced to implement that.

7. Evaluation conclusions

continued

7.

The opportunity may even exist for RECoE to earn a national and even international reputation for holistic long-term regional community planning facilitation, but to do this the case studies of projects need to be documented and published in appropriate peer reviewed academic journals, and this also takes time.

8.

It's possible that the further away from Southern Queensland RECoE operates, the less significant is the RECoE 'brand' and that the local partners (JCU and CQU) are seen as the providers more so that RECoE in their regions. Obviously there's nothing wrong with this, but it is possible that people from Southern Queensland could spend more time in the central and northern regions and vice versa to learn and exchange ideas and as a means of ensuring that the learnings from all activities and regions are made available to other regions. Doing this not only facilitates information exchange, it also strengthens the RECoE brand which may have strategic benefits (reputation, recognition and brand development) in the longer term.

9.

Ensuring RECoE's strategic intent is clearly defined and retaining focus to optimise the use limited resources available to it, is important. Having invested the past 4–5 years to establish relationships throughout regional Queensland, it may be timely to adopt more of a transformational orientation, as empowering and equipping communities to take responsibility for their own long-term planning is an effective way to build resilience.

An opportunity may exist for RECoE to extend its activities into facilitating business, start-up and entrepreneurial success across regional Queensland. It has already done this in the Goondiwindi region and there appears to be a significant demand for similar facilitation in Far North and Central Queensland. Perhaps more research, in collaboration with the Departments of State Development, Infrastructure, Local Government and Planning and Queensland Agriculture and Fisheries is required to inform the degree to which RECoE should invest in activities to facilitate the development of agribusinesses, regional businesses and value chains across regional Queensland.

LI.

The developments being planned along the Fitzroy River (Rockhampton, CQ) suggest that opportunities will exist in the future for market research and agribusiness skills development to facilitate future development for agribusiness value-adding and supply chain planning and management. These exists almost certainly exist elsewhere across regional Queensland, and may represent an opportunity for RECoE to contribute.

If it is not currently being done, perhaps RECoE could be gathering qualitative and quantitative data and feedback from participants on a more regular basis rather than simply by way of an end of project milestone. This data could then form part of the final evaluation, but also useful for guiding delivery of outputs during the course of the project.

In numbers

2018-2021

4 universities united in partnership to provide insight into rural and regional economies









Organised into 5 key themes (economic tools, regional innovation, value chains, policy and governance, engagement and translation)













Created new insights via analysis of rural QLD economy for state agencies and >50 LGAs



25 key issue and economic practical webinars run with over 500 attendees from regions



More than 30 researchers engaged across four universities



More than 20 active additional research projects



25 research projects completed



Over 50 national media expert commentaries



Centre teams established at 6 locations across Queensland



Over \$10 million in funding since original 2018 contract



92 features in media publications (2019–2021)



Diverse, industry and geographically relevant industry advisory board



Potential media audience of over 475 million between Jan 2019 and July 2022



Over 3000 in person regional engagements



8 PhDs – three completed and working on RECoE projects



13,559 unique visitors to web site with over 34,000 page views



30 technical papers and over 150 publications



5 regional drought plans covering 28 local government areas



Developed and focussed the regional development topic across 4 universities and industry RDCs (MLA, GRDC) and advocacy groups (NFF)



Created
15 place-based
regional partnerships
in research projects
from Quilpie
to the Cape



Mentored and supported local regional leadership groups and organisations

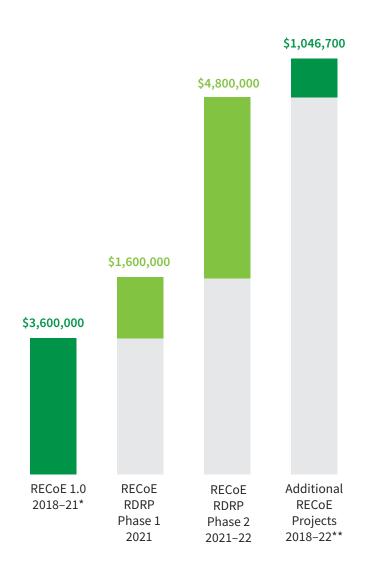


Represented regional issues in national and international forums

RECoE financial summary

USQ was the primary administrative home for RECoE and the below figures (8.1 and 8.2) reflect all funding and outgoings for the central contract between DAF and RECoE. There are also additional funding for projects not in the original contract but these are limited to those that went through the USQ financial and contracts system and do not necessarily include other funding and projects won by the other three partners Universities in the 2018-2022 period.

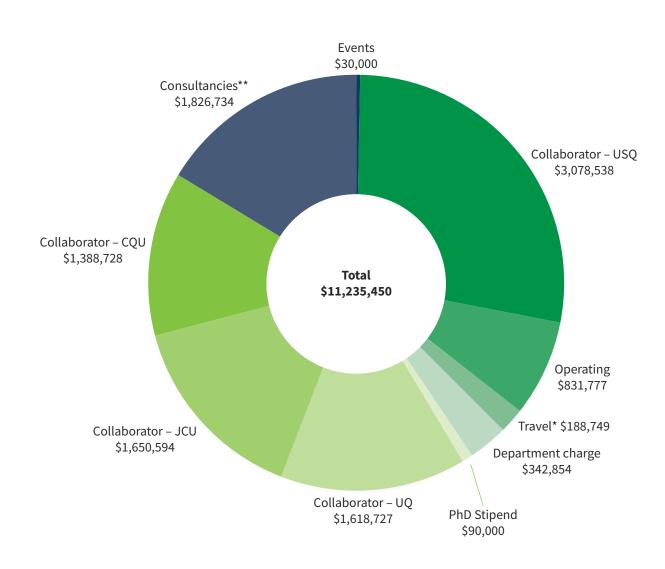
Figure 8.1 RECoE funding 2018-2022



^{*}Note Qld government \$3,000,000 and University cash contributions \$600,000

^{**} USQ projects only in this total.

Figure 8.2 RECOE expenses breakdown 2018-2022



*USQ travel only accounted for here ${}^{\star\star}\text{Consultancies here cover internal researchers engagements and The Yellow Company in RDRP}$ Phase 1 and 2 for project management services and compliance

References

Akbar, Delwar, John Rolfe, Azad Rahman & Darshana Rajapaksa (2020), Can cooperative business models coordinate horizontal and vertical supply chains? A case study in the Australian pineapple industry, https://www.ruraleconomies.org.au/top/research-papers/can-cooperative-business-models-coordinate-horizontal-and-vertical-supply-chains-a-case-study-in-the-australian-pineapple-industry/

Babacan, Hurriyet & Allan Dale (2019) Emerging rural and regional policy considerations for Queensland: an overview paper, https://www.ruraleconomies.org.au/top/research-papers/emerging-rural-and-regional-policy-considerations-for-queensland-an-overview-paper/

Babacan, Hurriyet, Allan Dale & Jennifer McHugh (2020), Population policy for regional and rural Queensland, https://www.ruraleconomies.org.au/policy-development/population-policy-for-regional-and-rural-queensland/

Babacan, Hurriyet, Allan Dale & Jennifer McHugh (2019), QLD rural and regional workforce policy analysis, https://www.ruraleconomies.org.au/policy-development/qld-rural-regional-workforce-policy-analysis/

Marshall, Amber, Allan Dale, Hurriyet Babacan & Michael Dezuanni (2019), Connectivity & inclusion in regional and rural communities, https://www.ruraleconomies.org.au/policy-development/connectivity-inclusion-in-regional-and-rural-communities/

Marshall, Amber, Hurriyet Babacan & Allan Dale (2021), Leveraging digital development in regional and rural Queensland: Policy Discussion Paper, https://www. ruraleconomies.org.au/media/1309/recoe_paper_june-2021-digital-connectivity-final-paper-web-version.pdf

Meath, Cristyn, Belinda Wade, John Mangan, Spencer (Yumeng) Tong & Ben Lyons (2022), Maximising the value of the energy transition for rural and regional Queensland, https://www.ruraleconomies.org.au/media/1415/aibe-recoe-report-3092022-9553.pdf

Renando, Chad (2021) *Burnett Inland Futures*, Red Earth Community Foundation.

Star, Megan, John Rolfe, Ben Lyons (2021), Local Consumer Demands and Domestic Supply of Sheep and Goat Meat, https://www.ruraleconomies.org.au/value-chains/local-consumer-demands-and-domestic-supply-of-sheep-and-goat-meat/

Star, Megan, John Rolfe, Fleur Morrish & Ben Lyons (2021), Supply Chains of the Sheep and Goat Meet Industry, https://www.ruraleconomies.org.au/media/1364/sheep-goat-meat-supply-chain-august-final-002.pdf

West, Jason, Jim Cavaye and Kristy Frahm (Burnett Inland Economic Development Organisation) (2010), Irrigation from the Boyne River: The Value of Improved Water Security, https://www.ruraleconomies.org.au/media/1204/34-boyne-irrigation-full-report-io-and-qualitative-20.pdf



Table of milestones and achievements

#	Description	Deliverables	Due date	Achievement
1.1	Complete contracts.	Contracts in place.	30-Nov-17	Completed March 2018
1.2	The establishment of Centre sites in 6 locations including technology hubs.	Centre teams established at 6 locations.	20-Dec-17	Delivered March 2018
1.3	Steering Panel appointed.	Appointments made.		Appointed June 2018 – first meeting August 2018
1.4	Appoint Chair and research positions.	Position contracts in place, appointments made.		Director commenced August 2018
1.5	Consolidation of relationships with partners, collaborators, and rural stakeholders.	Engage rural stakeholders, partner organisations and national and international collaborators.	30-Mar-18	Delivered January – March 2018
1.6	The Establishment of detailed action plans for delivery of outputs.	Develop detailed action plans for Centre teams.		Delivered June 2018
2.1	Identify and address gaps in rural and regional economic development capability with new and/ or adapted tools and techniques tailored to Old needs.	New regional Input/ Output model with 2 case studies to illustrate the application and benefits of the model.	29-Mar-19	Regional input/output models were developed for two North Burnett locations being Boyne River and Coalstoun Lakes and 50-60 landholders were engaged consultation and final delivery of the report. First version of this paper was published https://www.ruraleconomies.org.au/economic-tools/irrigation-from-the-boyne-river-the-value-of-improved-water-security/

#	Description	Deliverables	Due date	Achievement
2.2	Review existing government policies relevant to rural economies, contextualise major policy options and methodological developments in economics and practitioner terms.	A report on the key policy factors shaping rural economies in Australia taking account of the political and socioeconomic directions of rural and regional development here and overs as, with recommendations for further research.	29-Mar-19	Two reports were prepared by Professors John Cole, John Rolfe, Allan Dale, and Jim Cavaye and published on the web site: https://www.ruraleconomies.org.au/top/research-papers/rural-economic-issues-a-background-paper/ https://www.ruraleconomies.org.au/policy-development-for-regional-queensland/
2.3	Analyse issues facing agricultural value chains in Queensland, engage with agricultural and value chain enterprises to identify and select high impact strategic case studies.	A research paper scoping issues and opportunities in Qld agricultural value chains to inform development of collaborative research projects enhancing production and market value creation in the beef, horticulture and aquaculture sectors.	29-Mar-19	Schrobback, P., Star, M., Rolfe, J., 2019. Describing and analysing agricultural supply chains in Queensland, Report provided to the Rural Economies Centre of Excellence (Project 3a: Reviewing agricultural value chains in Queensland), Toowoomba.
2.4	Develop active university research engagement programs with Qld rural communities.	RECoE research partners have >8 researchers actively engaged in Qld rural communities.	29-Mar-19	Approximately 20 academics and researchers were engaged in community engagement, development and research including PhD research projects.
3.1	Strengthen rural economic development capacity by identifying and researching new business models applicable in regional Queensland.	Research paper on categories of new business models, including capital structures, applicable to rural businesses.	30-Jun-19	https://www.ruraleconomies.org.au/ regional-innovation/quilpie-wellspring-a- circular-economy-concept-for-remote-and- arid-regions/ https://www.ruraleconomies.org.au/ regional-innovation/mutual-ownership- solutions-for-regional-infrastructure- innovation/

#	Description	Deliverables	Due date	Achievement
3.2	Analyse policy options on topical issues shaping the future of Qld rural economies.	Policy paper on skills, labour, employment and development issues characterising and shaping the future of rural economies in Queensland, with recommendations for government policy change.	30-Jun-19	https://www.ruraleconomies.org.au/policy-development/qld-rural-regional-workforce-policy-analysis/
3.3	Analyse issues facing agricultural value chains in Queensland.	A report on the methods to be used in the three value chain analyses (horticulture, aquaculture, and beef).	30-Jun-19	Schrobback, P., Star, M., Rolfe, J., 2019. Describing and analysing agricultural supply chains in Queensland, Report provided to the Rural Economies Centre of Excellence (Project 3a: Reviewing agricultural value chains in Queensland), Toowoomba.
3.4	Identify and address market gaps in rural and regional economic development capability with new and/or adapted tools and techniques tailored to Qld needs.	A research paper on methods for analysing regional economic benefits of investment in new irrigation infrastructure, including a case study to illustrate application of the methods.	30-Jun-19	https://www.ruraleconomies.org.au/economic-tools/irrigation-from-the-boyne-river-the-value-of-improved-water-security/ The second version was provided for this milestone. Jason West (UQ), Jim Cavaye (USQ were the key researchers along with Kristy Frahm from the Burnett Inland Development Organisation (BIEDO)
3.5	Build the capacity of regional economic development practitioners.	Training materials and programmes for use in subsequent engagement and training activities.	30-Jun-19	Six short courses were presented during June, July, August 2019 focused on "Approaches to Rural Economic Development" to 102 participants.
4.1	Identify success factors and models for regional innovation ecosystems that contribute to regional economic development.	A research report on the factors contributing to effective regional innovation ecosystems, including case studies from regional Qld.	30-Dec-19	https://www.ruraleconomies.org.au/ regional-innovation/creating-a-regional- innovation-ecosystem-the-goondiwindi- case-study/ https://www.ruraleconomies.org.au/ top/research-papers/sowing-the-seeds- creating-a-regional-innovation-ecosystem- in-goondiwindi/

#	Description	Deliverables	Due date	Achievement
4.2	Research policy options on topical issues shaping the future of Qld rural economies.	Policy paper on options to promote sustainable populations in rural communities in order to enable economic development, with recommendations for government policy change.	30-Dec-19	https://www.ruraleconomies.org.au/policy-development/population-policy-for-regional-and-rural-queensland/
4.3	Analyse issues facing agricultural value chains in Queensland.	A report on the progress of data collection and analysis for strategic value chain issues in beef, horticulture, and aquaculture.	30-Dec-19	https://www.ruraleconomies.org.au/top/research-papers/describing-analysing-and-comparing-edible-oyster-supply-chains-in-australia/https://www.ruraleconomies.org.au/top/research-papers/consumer-demands-seizing-the-opportunities-in-the-beef-industry/
4.4	Build the capacity of rural economic development practitioners through an annual program of training and skills development.	At least 50 economic development practitioners and stakeholders trained in rural economic analysis and development.	30-Dec-19	A total of 102 participants attended training workshops at Mt Isa, Longreach, Toowoomba x 2, Rockhampton and Cairns. The handbook titled "Approaches to Rural Economic Development" (Cavaye, Lyons & Rolfe, 2019) was updated.
4.5	Build the capacity of rural and regional community leaders to enable and manage economic development.	Place-based economic development capacity building delivered through roundtables, symposia and other forums to at least 50 stakeholders in 5 regional communities.	30-Dec-19	Details are attached in Appendices 2 and 3.
4.6	Achieve high levels of engagement and active translation of RECoE research.	A state-wide rural economic development forum conducted at a regional venue to ensure dissemination of RECoE research and engagement and development dialogue with stakeholders.	30-Dec-19	Public Lecture and Annual forum October 1/2 USQ Toowoomba Attendees = 81 at Oct 1 Lecture. Oct 2: Attendees = 110 Forum, Regional TV and radio coverage.

#	Description	Deliverables	Due date	Achievement
4.7	Identify and address market gaps in rural and regional economic-development capability with new and/or adapted tools and techniques tailored to Qld needs.	A research paper on methods for analysing regional economic benefits of investment in digital connectivity infrastructure, including a case study to illustrate application of the methods.	30-Dec-19	https://www.ruraleconomies.org.au/ policy-development/leveraging-digital- development-in-regional-and-rural- queensland-policy-discussion-paper/ https://www.ruraleconomies.org.au/policy- development/connectivity-inclusion-in- regional-and-rural-communities/ https://www.ruraleconomies.org.au/top/ research-papers/social-and-economic- impacts-of-digital-connection-in-remote- communities-central-western-queensland/
5.1	Research policy options on topical issues shaping the future of Qld rural economies	Policy paper on options to attracts investment in agricultural supply chains in regional communities – with recommendations for government policy change	30-Jun-20	https://www.ruraleconomies.org.au/top/ research-papers/can-cooperative-business- models-coordinate-horizontal-and- vertical-supply-chains-a-case-study-in-the- australian-pineapple-industry/
5.2	Build the capacity of regional economic development practitioners through an annual program of training and skills development	At least 50 economic development practitioners and stakeholders trained in rural economic analysis and development	30-Jun-20	12 webinars were conducted (due to Covid) https://www.ruraleconomies.org.au/ translation-engagement/rural-economies- webinars-2020/
5.3	Analyse issues facing agricultural value chains in Queensland	A research paper or papers on opportunities and options to improve the efficiency of beef, horticulture, and aquaculture value chains in Queensland	30-Jun-20	See: https://www.ruraleconomies.org.au/value-chains/value-chain-analysis-threecase-studies/
6.1	Extend success factors and models for regional innovation ecosystems that contribute to regional economic development	4 workshops in regional areas to extend the success factors required for successful rural entrepreneur networks as catalysts/platforms for rural economic diversification in Qld	30-Dec-20	Workshops held in Cloncurry, Brisbane, Bundaberg, Kingaroy and Goondiwindi

#	Description	Deliverables	Due date	Achievement
6.2	Achieve high levels of engagement and active translation of RECoE Research	A state-wide regional economic development forum conducted at a regional venue to ensure dissemination of RECoE research and engagement, and development of dialogue with stakeholders	30-Dec-20	
6.3	Research policy options on topical issues shaping the future of Qld rural economies	Research policy paper that explores key policy settings required to increase the exposure of regional and rural Queensland to the digital economy, in particular to inform government policy relating to planning for digital infrastructure, building digital capability and effective planning for digital connectivity.	30-Dec-20	https://www.ruraleconomies.org.au/top/research-papers/can-cooperative-business-models-coordinate-horizontal-and-vertical-supply-chains-a-case-study-in-the-australian-pineapple-industry/https://www.ruraleconomies.org.au/top/research-papers/describing-analysing-and-comparing-edible-oyster-supply-chains-in-australia/https://www.ruraleconomies.org.au/top/research-papers/consumer-demands-seizing-the-opportunities-in-the-beef-industry/https://www.ruraleconomies.org.au/top/research-papers/consumer-demands-seizing-the-opportunities-in-the-beef-industry/lmpacts of COVID-19 on patterns of meat-consumption in Australia (Rolfe, Rajapaksa, Star & De Valck) In review
6.4	Identify funding options and partners for sustaining key positions and centre programs beyond the initial three years of funding	A business model (or options for a business model), including a funding plan, for Phase 2 of RECOE (post the end date of this contract)	30-Dec-20	

#	Description	Deliverables	Due date	Achievement
7.1	Build the capacity of rural and regional community leaders to enable and manage economic development	Place-based economic development capacity building delivered through roundtables,	30-Jun-21	Goondiwindi Regional Council – January to April 2021: economic Development investment strategies workshops (Lyons & Renando) symposia and other forums to at least 50 stakeholders in 5 regional communities. Burnett Inland innovation ecosystem report – Presentation to South Burnett Council – 19 May Presentation to the South Burnett Council of the Burnett Inland innovation ecosystem report. Community development Post Covid –
				Music Trial evaluation study – Dr Geoff Woolcock (USQ), Dr Meg Forbes (USQ) Longreach to Dalby 5 sites event evaluation and economic impact assessment of community events.
7.2	Research policy options on topical issues shaping the future of Qld rural economies	Research policy paper on Australia's energy transitions and its impact on rural and regional communities including the impact of government incentives, regulations and policies that shape the development of future energy supply.	30-Jun-21	https://www.ruraleconomies.org.au/ top/research-papers/leveraging-digital- development-in-regional-and-rural- queensland-policy-discussion-paper/ The New Bradfield Scheme and the future of hydro generation in the NEM (Branigan, 2021)
7.3	Build the capacity of regional economic development practitioners through an annual program of	At least 50 economic development practitioners and stakeholders trained in rural economic analysis and development	30-Jun-21	Cape York Innovation forum, Cooktown Innovation and Economic Diversification (Babacan, Dale – JCU, Renando – USQ) June 16 2021) training and skills development. Tropical innovation festival – 9 June – Facilitating panel on Activating the Australian innovation ecosystem and communities panel (Dr Chad Renando – USQ, Professor Hurriyet Babacan – JCU) Maranoa Innovation network – Supporting the Maranoa region with the development of their ecosystem, including entrepreneur support and the development of a local mentoring network.

#	Description	Deliverables	Due date	Achievement
7.4	Research policy options on topical issues shaping the future of Qld rural economies.	Policy paper on mechanisms to facilitate smarter, more agile value chains in agriculture in regional areas – with recommendations for government policy change.	30-Jun-21	Megan Star, John Rolfe, Ben Lyons: Sheep Meat analysis (3 papers) plus synthesis and policy recommendations
8.1	Identify and address market gaps in rural and regional economic development capability with new and/or adapted tools and techniques tailored to Qld needs.	A research paper on methods for analysing regional economic impacts of environmental	30-Sep-21	Mackenzie and Friessen: Examining Innovative Policies to Sustain Environmental Offsets in Rural Communities: An Analysis of Granite Belt Wine Growers offsets, including case studies to illustrate application of the methods. Related outputs: Agrifutures Project with Southern Qld Landscapes (\$150k Funding)
8.2	Identify and address market gaps in rural and regional economic development capability with new and/or adapted tools and techniques tailored to Qld needs.	A research paper on methods for analysing regional economic benefits of Agri-tourism,	30-Sep-21	Driml, Brown and Mackenzie: Agri tourism in the Granite Belt including case studies to illustrate application of the methods.
8.3	Build the capacity of rural and regional community leaders to enable and manage economic development.	Place-based economic development capacity building delivered through roundtables, symposia and other forums to at least 50 stakeholders in 5 regional communities.	30-Sep-21	2019 Annual forum 2019 Regional workshops 2020 Webinar series 2021 Webinar series
8.4	Measurement and evaluation of RECOE (Phase 1) performance and impact	Final report for RECOE Phase 1, including evaluation of outcomes and impacts for Queensland Rural Economies.	30-Sep-21	Final report including an evaluation of impact (this document) has been finalised and submitted.

